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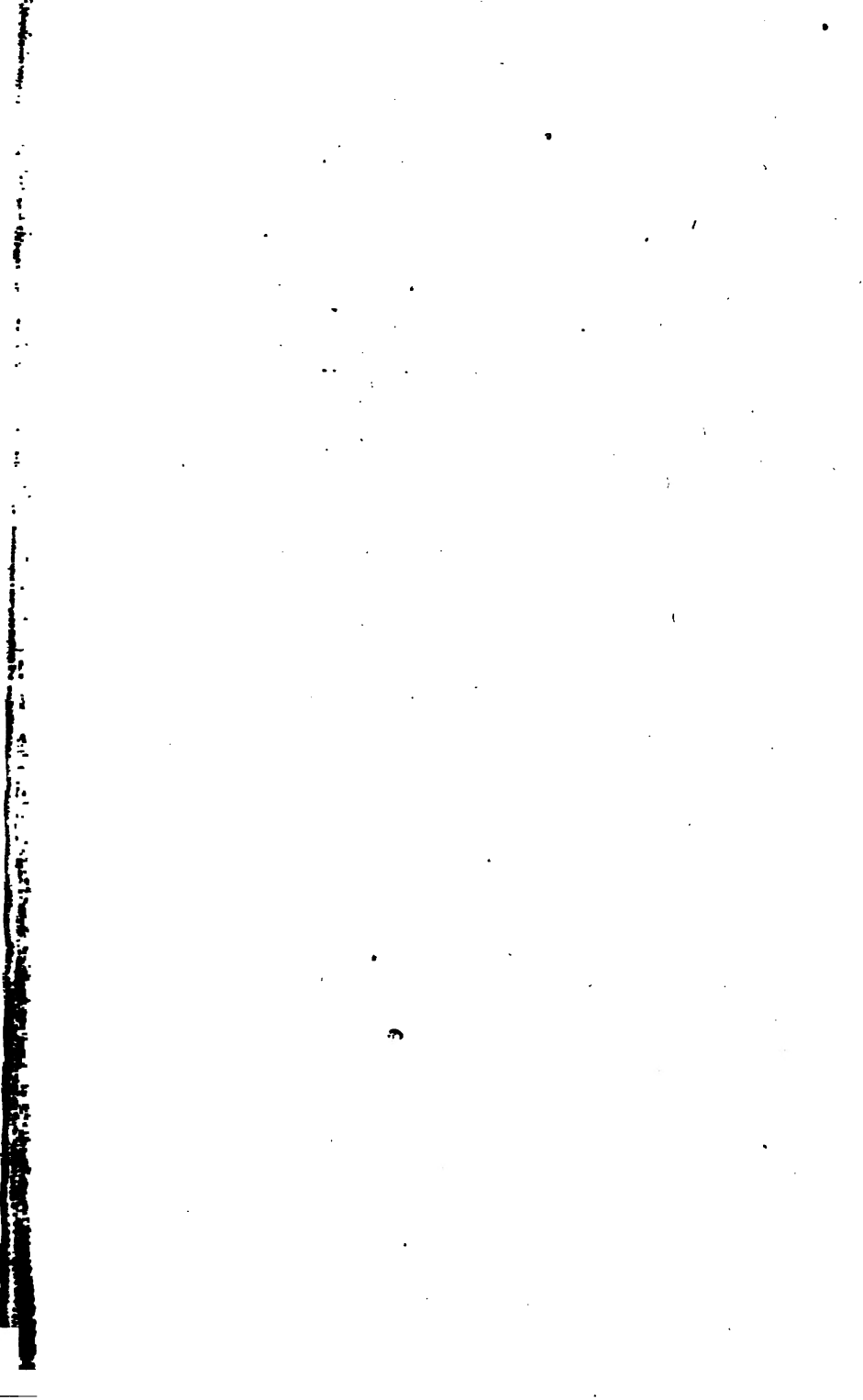
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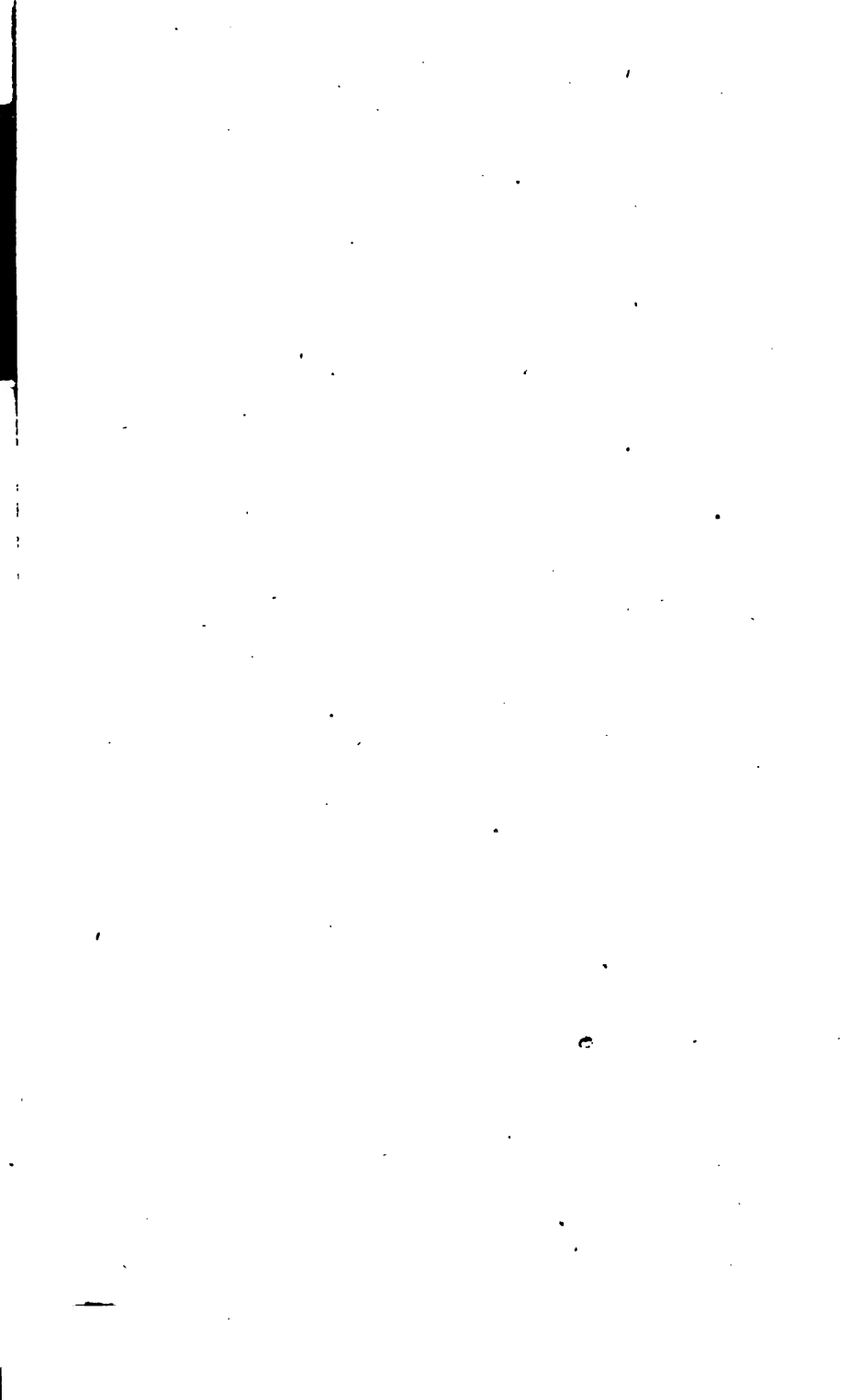
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British Dental Association.

(INCORPORATED JUNE 3RD, 1880).

Extracts from Memorandum of Association and Bye-Laws.

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"The Periodical meetings of the Members of the Association, and of the Dental profession generally, in different parts of the country.

"The publication of a periodical journal, and by

"The maintenance of the spirit and provisions of the Dentists' Act, by such lawful means as may be necessary, &c., &c."

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"1. A person who is registered in the Dentists' Register shall be eligible for election as a Member of the Association, provided that he be of good character; that he does not conduct his practice by means of the exhibition of Dental specimens, appliances, or apparatus in an open shop, or in a window,

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The subscription is One Guinea per annum, and each Member is entitled to a copy of the Journal of the Association monthly, and to attend the Annual Meetings of the Association.

The next Annual Meeting will be held in Liverpool during the month of August, under the Presidency of H. Campion, Esq., M.R.C.S., of Manchester. The precise date will be duly announced in the Association Journal.

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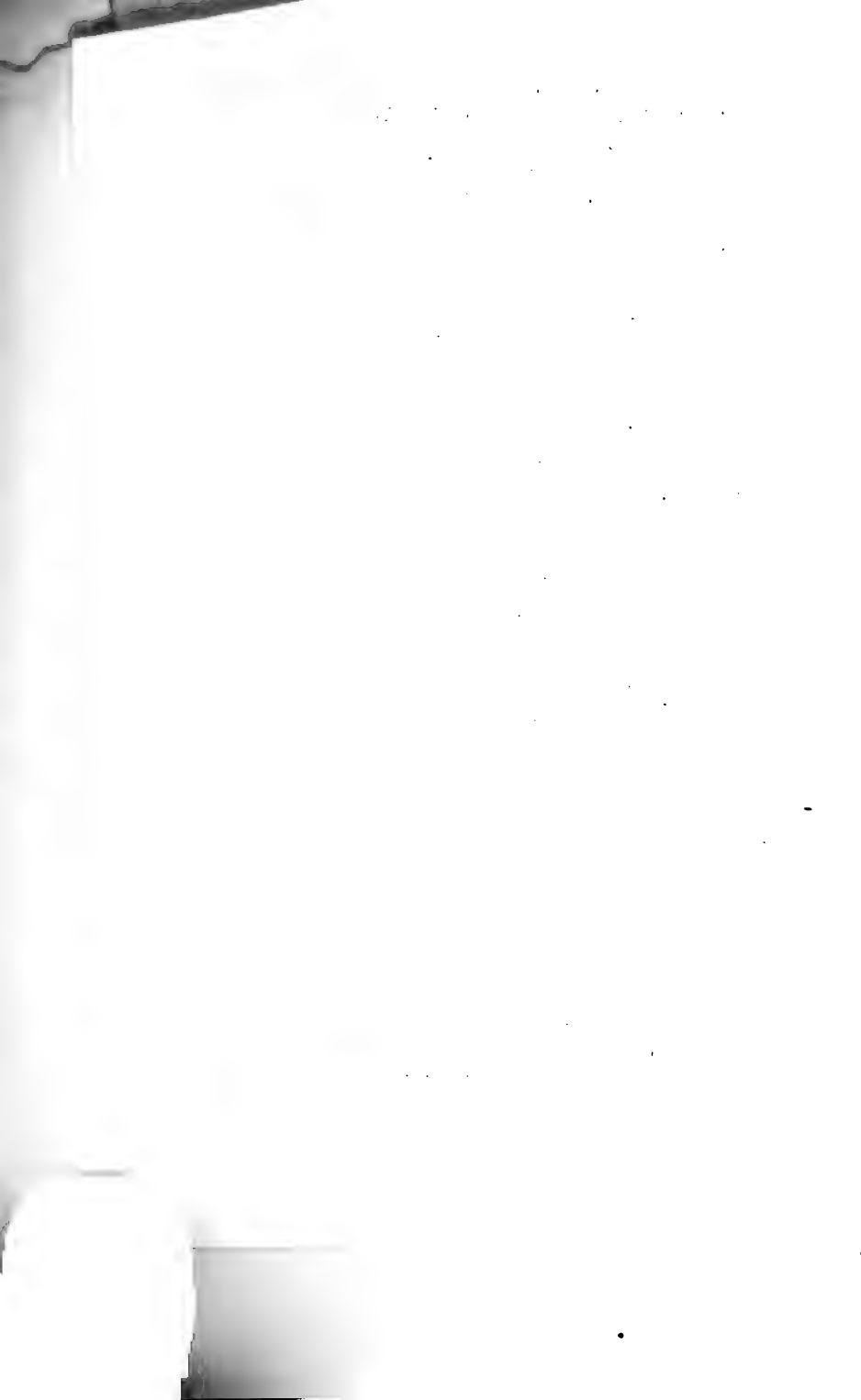
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fruits of honest work are ripening with a progressive st

manufacture of their characteristic acids which, in turn, decalcify the matrix, and discolour the whole mass.

From our observations of cementum to which caries has extended, we conclude that the process there is very similar ; the bioplasmic contents of the lacunæ and canaliculi afford board and lodging for the organisms, which multiply, and when sufficiently numerous, decalcify the surrounding bone so that the lacuna loses its outline and extends in all directions.

With regard to the pulp, its inflammation does not materially differ from that of any other cellular connective tissue. The influence of germs upon such tissues, when inflamed, has been already demonstrated by Professor Lister. One peculiarity distinguishes this from kindred tissues, and that is that a tooth being an absolutely shut box, its contents are singularly amenable to antiseptic treatment. Having once rendered them aseptic by means of a penetrating agent, it is easy to keep them absolutely so, by sealing the only opening of the cavity with a filling. With a view of testing this fact, the theoretical accuracy of which we could not doubt, we have repeatedly allowed the gangrenous contents of a pulp cavity in which suppurative inflammation has gone on, to remain in the tooth covered by a filling.

All that is necessary to prevent further disturbance is to soak them in a powerful antiseptic. I have chosen for this purpose a combination of iodoform and eucalyptus oil, because it is the most powerful and the most permanent in its effects. After a certain period, during which the cavity has been sealed with a temporary filling, if no disturbance has occurred, I have substituted a permanent filling, and almost invariably with the most satisfactory results. This treatment is, I think, eminently conservative surgery and based upon sound surgical principles.

M. Magitot, in a recent most interesting article upon the development of the teeth, lays great stress upon the fact that the odontoblast layer is very essential to the health of the tooth ; and if we can, by this method of dealing with the

matter, avoid the otherwise necessary alternative of removing it together with all dead matter, we certainly give the tooth an extra chance. The more of the natural vital contents of the pulp cavity we can preserve *in situ* the better for the tooth.

Further, we would propose for your consideration a theory as to what is the probable course of behaviour of a tooth pulp under these circumstances; at present only a theory, but one which we hope to establish shortly by ocular demonstration, and lay before you in a mature form. Suppose a tooth, with a large cavity communicating with the pulp-chamber; suppose that gangrene and suppuration have extended down two-thirds of the pulp-chamber, and that the extreme periphery of the pulp (*membrana eboris*), and the contents of the apex of the fang alone remain alive; suppose the cavity cleared, a small portion of the surface of the slough removed, and the rest carefully soaked with eucalyptus oil until all the existing organisms are destroyed, and the cavity then filled with a permanent and effectual stopping: what becomes of the slough? In every other part of the body a slough that has been rendered and kept aseptic is gradually absorbed by the neighbouring vessels, while new cicatricial connective tissue is laid down in its place this has been repeatedly demonstrated in sloughs of the limbs treated antiseptically. We therefore suggest that the same thing that happens in other parts of the body, under similar circumstances, happens in the pulp-chamber: the slough is removed gradually by absorption, while its place is supplied by healthy cicatricial tissue; like all scar tissue, it is of a lower order than that which it replaces, but it is a living tissue. After a lapse of time, then, we imagine that, if the tooth in question were extracted and split open, its contents would be found to be a healthy connective tissue, and not a slough at all.

Experiments on the Living Subject.—Taking, then, for granted the facts established by Lister and others, relative to the effects of the presence of organisms in other tissues, we were convinced that the course of an alveolar abscess

was also profoundly modified by their presence. An aseptic or a septic alveolar abscess seemed to us to differ very much in the same way as a simple and a compound fracture.

To render such abscesses aseptic, we have injected them with eucalyptus oil and iodoform, and dressed them with lint soaked in these substances.

By means of constant and careful dressings and injections, we have been for the last two years very successful in inducing extensive, and often old-standing alveolar abscesses to run a rapid aseptic course of recovery. Wherever we have failed we have been able to trace our failure to the presence of a sequestrum, which has afforded an inaccessible refuge for organisms, and which, until nature has rejected it, or surgical skill removed it, has kept up the mischief despite all applications. Mr. David Hepburn, in a recent able paper read before the Odontological Society, urged this fact very strongly and clearly, and we quite agree with him that, while dead bone is present, antiseptics may mitigate, but are powerless to annihilate the disease.

Microscopical.—The sections from which our observations have been made have been cut from fresh teeth, very shortly after extraction, and without the use of any decalcifying or softening re-agent.

We have subsequently stained them with an aniline dye (methyl violet), following as closely as possible the process recommended by Koch—a process which renders micrococci fairly distinct under a $\frac{1}{4}$ lens, with proper illumination. A few typical slides we have been enabled to show you, owing to the kindness of our friend, Mr. Nelson. I need scarcely add that as the powers are very high oil immersions ($\frac{1}{8}$, $\frac{1}{32}$, $\frac{1}{33}$), we shall ask you to refrain from touching the adjustments. We have also prepared some diagrams illustrating upon a larger scale the appearance of the objects. In dentine, which has occupied most of our attention, we have invariably discovered the channels containing the dentinal fibrils more or less infiltrated with germs—for the most part micrococci, oval and rod-shaped bacteria. These germs we find penetrating, at first in

Indian file, then more thickly, along the course of the fibrils. As they accumulate and choke up the channels they encroach upon the matrix, diminishing the distance between the fibrils until the matrix entirely disappears, the neighbouring channels join, and the whole tissue becomes one conglomerated mass of organisms. Beyond the sphere of visible decay, sections cut from apparently healthy tissue show here and there a narrow line of micrococci or bacteria, like an advance guard, and such isolated tubes or germs probably penetrate far into tissue which the naked eye would pronounce sound.

In decay which has appeared in blocks of hippopotamus ivory worn on a plate, we have observed very similar appearances, also in some caries which we have produced ourselves in a flask, by exposing a sound tooth to septic agencies.

In cementum hitherto we have experienced some difficulty in obtaining sections of tissue into which caries has penetrated; but where we have succeeded we have found the lacunæ filled with germs. In some lacunæ the protoplasm of the osteoblast cell is slightly stained, the nucleus very deeply, and a few germs are seen scattered about in little groups. In others the protoplasmic contents of the space appear to have been totally destroyed, the outline lost, and the whole lacuna crowded with germs.

Summary.—The preceding observations, together with the experiments with flasks and upon the living subject above referred to, have led us to adopt certain views which may be regarded as an extension of the views previously held upon the matter.

1. We consider that caries is absolutely dependent upon the presence and proliferation of organisms. That those organisms attack first the organic material, and feeding upon it, create an acid which removes the lime salt, and that all the differences between caries and simple decalcification by acids is due to the presence and operation of germs. This view we propose to call the "septic theory"

2. That suppuration of the pulp and its sequelæ, such as

alveolar abscess, depend also upon the successful working of organisms.

3. We feel justified in concluding that the successful exclusion of germs would prevent the disease, and that their exclusion is quite easy and practicable by the use of powerful and penetrating antiseptic agents, such as eucalyptus oil.

We have found that the space of time allotted to a paper rendered it quite impossible to enter into all the details of treatment and experiment we could have wished. These experiments have extended over three years, and cannot be condensed into a half-hour paper. All, therefore, that we have been able to do has been to lay before you the main facts and a few typical results, and in doing so we have been very kindly assisted by Mr. Nelson, whose microscopical arrangements have enabled us to show you our results in a more perfect manner than would have been otherwise possible.

HOSPITAL REPORTS AND CASES.

Evelina Hospital.

CASES OF NECROSIS OF THE JAW IN CHILDREN:

Under the care of ISIDOR J. LYONS, L.R.C.P. Edin., M.R.C.S., L.D.S. Eng.,
Dental Surgeon to the Hospital.

A NUMBER of children are brought to the above-named hospital suffering from necrosis of the upper or lower jaw. These little patients are not ill fed, neither have they suffered from any fever or other illness, yet in many cases the necrosis is severe, and the loss of bone extensive, and after the removal of the sequestrum the child's restoration to health is rapid. The course the disease follows appears to indicate a local origin, and that it is the result of acute periodontitis, as in the following cases:—

CASE I.—Alexander Mackenzie, æt. five years, was brought to the out-patients' room suffering from toothache, arising from acute periodontitis of the first and second right lower temporary molars. There was much swelling and discharge of pus. The teeth were extracted. The

following month he returned, and on examination, necrosis was found to have supervened, embracing the sockets of the teeth he had lost. After the usual local and constitutional treatment for about three weeks, the sequestrum (which contained the crypts of the permanent canine and bicuspid and their crowns) separated, and the patient rapidly recovered.

CASE 2.—William Rawlings, æt. five years, admitted September 10, 1880. He had always good health until three years ago, when he had measles, from which illness he made a fair recovery. About seven weeks ago the child was noticed to be ailing, and two days afterwards a swelling was observed on the left side of the lower jaw, and he began to complain of pain, but it was not at any time severe. The breath was offensive, and he was ill in himself. The child was brought to the hospital and a tooth extracted. The swelling however remained, but did not increase, and there was very little pain. No cause can be assigned from injury, irritant, or constitutional disease. September 20. There is a puffy swelling of the left side of the lower jaw, reddened and painful to touch; there are three roots, with the gum inflamed and partly overlapping them; on manipulation a quantity of yellowish pus wells up round the stumps. November 13. The piece of necrosed bone which had become loose was removed; the sequestrum involved the entire left half of the lower jaw. November 20. The patient was discharged.

CASE 3.—Martha Saunders, æt. six years, was brought to the hospital, September 27, 1881, with acute periodontitis of the first and second right upper temporary molars. The teeth were extracted.

October 11. Patient returned, and necrosis of the upper jaw was seen to have occurred in the sockets which had contained the teeth. Within a fortnight, and after the usual treatment, the sequestrum was taken away, and she was discharged the following week.

REVIEWS AND NOTICES OF BOOKS.

A Manual of Dental Surgery and Pathology. By ALFRED COLEMAN, F.R.C.S. and L.D.S.Eng., &c. (Smith, Elder & Co., 1881.)

MR. COLEMAN'S name has long been familiar to the Dental profession, and a work upon Dental Surgery from his pen will be sure to be received with interest and attention by his professional brethren, and also by those who are looking forward to enrolling themselves in that brotherhood at some future time.

As Mr. Coleman observes in his preface, the science of Dental Surgery advances every day, and is perpetually creating a need for a fresh record of its advances. Mr. Coleman as an examiner and a lecturer upon Dental Surgery, is exactly the man to whom we naturally turn to demand this record, and he has responded with the present manual. The author very graphically recounts the troubles of first dentition, and a great deal of his advice would do a world of good if read by the lay public, as well as by the profession. Mr. Coleman insists upon the importance of examining the mouth in every infant with signs of nervous derangement. This is good advice, but we would go further, and say in every case of nervous derangement, whatever, infant or adult, the mouth should be examined, and moreover, examined by a specialist, and that the general practitioner who is baffled by a case of neuralgia in any of its hundred insidious forms, and neglects the precaution of obtaining a special opinion upon the state of the dental organs, is not doing his duty to his patient. We could almost wish that Mr. Coleman had added a chapter upon the evils which result to the whole economy from the absence of teeth and consequent imperfection of mastication, a point very ably placed before the Odontological Society by Mr. Canton last year, and which formed the basis of one of the best dissertations upon dyspepsia we ever remember to have seen, contributed to the *British Medical Journal* by Dr. Lauder Brunton.

Mr. Coleman advances a theory regarding the mechanism

of the eruption of the teeth which is very ingenious, namely, that there is a "general growth and advance of bone towards the surface, the surface being the seat of a continual absorption." We think this view can scarcely be received until Mr. Coleman gives us some more definite proof of this outgrowth and absorption of the jaw bone: a little more evidence is needed, but we welcome the hint, and it is so ingenious that the scientific portion of the profession ought to thoroughly investigate it. The manner of both growths it involves requires demonstration, no doubt the lining membrane of the Haversian canal may be the seat of a deposit of bone, but a regular outward progression of layers of bone towards the surface, if it takes place, is capable of very plain ocular demonstration.

Nearly a quarter of the book is very properly devoted to the consideration of the all-important question of caries, its nature, causation, prophylaxis and treatment, all of them very vital points to us all.

Mr. Coleman gives a fair and impartial *resumé* of current opinions concerning the pathology of caries. We cannot help thinking, however, that it was a pity that the diagram on page 90 was allowed to appear in its present form, as it might be exceedingly misleading, and though Mr. Coleman states that it is diagrammatic rather than accurate, we think it a pity to risk conveying such a very erroneous notion of the size and arrangement of micrococci in dentine, as they are figured as occupying mere cracks and fissures, whereas they are invariably distributed along the course of the fibrils, and would not be visible at all under the magnification here figured. We must also take exception to the constant coupling of micrococci with leptothrix, as no relationship has yet been demonstrated between them. In other respects the chapter is a clear, circumstantial, and altogether useful account of existing opinions upon this vexed question.

The chapter which deals with the treatment of caries is, we think, likely to prove the most valuable in the book and we would urge upon every young student the importance of mastering it in all its details before he commences

his actual practice at the hospital. Such a proceeding would save his patient, his teachers, and himself, infinite pain, trouble, and disappointment. No book can in any way be a substitute for practice and actual personal experience; but the lessons inculcated here may render such practice and subsequent observation tenfold more valuable and accurate. While recommending the chapter to the careful study of the pupil, we may also recommend the fully fledged practitioner to refresh his memory at the same source.

Mr. Coleman inclines to the view that the odontoblast cells are practically nerve endings, a view in which we entirely coincide; in this connection he refers to the researches of Boll, and might with advantage have mentioned the confirmatory observations of MM. Legros and Magitot, who, in a recent article upon development, claim to have demonstrated the connection between the terminal nerve branches in the pulp and the odontoblast layer. We have not space to discuss the details of treatment, but must rest content with the general statement that scarcely any detail has been omitted.

Extraction is a matter in which it is almost beyond the power of any writer to convey much by book description—to learn extraction there is only one real road and that is to practise it, beyond a few general rules we do not think that much help ever can be conveyed to the novice by any direction however minute, and those who have any experience of their own in the matter will scarcely attend much to book directions. A great many practitioners, for instance, would hesitate to commence the extraction of an upper molar with an inward motion as advised on page 217, the deep bony insertion of the palatine fang and the slender nature of the outer alveolar plate leading them to prefer an outward movement.

In the chapter on Anæsthesia, Mr. Coleman deals with a subject to which he has for a long time devoted considerable time and interest, and we confess to having read the chapter with great interest ourselves. Its value as a scien-

tific treatise is enhanced by the diagram on page 271, and the subjoined views of Dr. Lauder Brunton upon the effects of an anæsthetic upon the nervous system, which a great many of Mr. Coleman's readers will remember to have listened to with such pleasure at the Odontological Society last year.

At the end of the book Mr. Coleman has devoted a page or two to the nervous affections resulting from Dental irritation. The space allotted to this subject appears to us far too short, and we strongly advocate its expansion in a future edition. We think that the treatment of neuralgia so incessantly recurring in our daily practice ought, for the sake of the student and practitioner alike, to be discussed at greater length and in greater detail.

In conclusion, we congratulate Mr. Coleman upon his handbook, which neither terrifies us by its bulk nor excites our distrust by its too specious shortness.

Proceedings of the International Medical Congress, held in London, August. 1881. (4 Vols. Kolkmann, Regent Street.)

By the exercise of unremitting energy, Sir William MacCormac and Mr. G. H. Makins have succeeded in issuing three volumes of the reports of the International Medical Congress, and the publication has thus been practically completed within the year 1881. Rather than delay the issue of the volumes, the correction of proofs has, in the case of some of the Sections more lately set up in type, been undertaken by the staff of the Congress.

The bulk of matter received rendered it quite impossible to publish every paper absolutely *in extenso*, but the inevitable curtailment has not been carried very far, nor, at all events in the case of Section XII., has anything of real value been excised by its Council, to whom this work of editing the papers was entrusted. Indeed, we are inclined to think that some of the papers have gained not a little in the process, by the excision of purposeless repetitions, vague or irrelevant sentences, and statements of facts which are, or ought to be, familiar to everyone; and probably the opinion of unbiassed readers will be that the Council, if they have erred at all, have erred in the direction of being too lenient in their judgment rather than the reverse.

It may perhaps be thought that the reports which have already appeared in this Journal will have taken away all the interest of the official publication ; but our readers will not find this to be the case. It is true that the reports of the discussions here given do not compare favourably with those which have already appeared in these pages ; but for this the individual speakers alone are responsible, as it was distinctly stated at the Congress that nothing would be taken cognisance of except what was handed in by the speakers themselves. But with regard to the papers it is different. We were only able to publish abstracts, and in some cases very imperfect abstracts, of the papers read, and we feel bound to admit that some of them come out in quite a new light when read *in extenso*. Amongst those specially worthy of notice is that of Dr. Arkövy, which at the time of the Congress attracted far less attention than it deserved. All the four volumes will be very shortly in the hands of the members of the Congress, and will be found to be a marvel of cheapness, when it is remembered that they are supplied at the cost of the original guinea subscription.

Before finally leaving the subject of the Congress and its proceedings, there are two points to which, in view of future gatherings of the same character, we should wish to call attention. We think that some more efficient steps should be taken to ascertain that papers proposed to be read do really contain some novel or original element. Those who were present will, we feel sure, agree with us when we say that one or two of those read in our Section would have been excellent lectures for a class of students, but were quite out of place before such an assembly as that which met in the Linnæan Society's room at Burlington House.

Secondly, we think that some assurance should be given that communications offered to the Congress have not been previously published. It is a fact that a paper read by a deservedly popular and respected visitor, had already appeared, practically word for word as read, in a well-known Dental journal, and was in our hands at the time of the meeting ; it had moreover been previously read before a foreign dental society. It is not fair that, on such occasions as these, valuable time should be occupied in listening to text-book compilations and already twice published compositions.

The Medical Directory for 1882. (Churchill & Co. Price, 12s. 6d. ; to Subscribers, 10s.)

This remarkable volume, projected by the late Mr. Yearsley, thirty-eight years ago, still maintains its well-earned reputation as an indispensable manual for every member of the medical profession, whether engaged in general or special practice. In a necessarily brief notice, it is impossible to convey a fair idea of the amount of information to be found within its covers. It gives an able summary of all the laws affecting the medical profession ; all information required by intending Medical and Dental students, such as the curriculum to be followed by the graduates at the various schools and universities, from the preliminary examination in arts up to the final pass examination. For the three divisions of the United Kingdom is given a local list of every practitioner, i.e., the street, or parish, or village, or township in which he may reside ; and a general list, which contains the name and address, qualifications and appointments, the school or schools at which he has studied, a list of his works as they may have appeared, either in independent volumes or as contributions to the transactions of particular societies, or in the periodical literature of the profession—of every medical man. Not only does it contain a list of the cities, towns, and villages in which medical practitioners reside, but it specifies the further divisions of localities into Chapelrys, Ecclesiastical districts, Hamlets, Libertys, Lieutenantcy Sub-divisions, Parishes, Parliamentary Boroughs, Towns, Townships, and Sub-districts, and it gives the population of each ; and where a Town and Parliamentary Borough are under the same title, gives the population of each. It is thus a valuable gazetteer, which contains in a condensed form information which, when it is required, has otherwise to be searched for in many, and sometimes unknown, directions.

It is therefore a matter of congratulation to the profession generally that we are able to announce, that in this invaluable volume is published not only a local list of qualified Dental practitioners, both at home and abroad, but a general list which sets forth the name and address, qualifications and appointments, &c., of every L.D.S. whose existence has come within the ken of the editor of this Directory.

In addition to this vast amount of information is a list of Members of the Medical Council, all information concerning appointments made by Government, and in fact every want of a medical practitioner regarding his profession, or of a student regarding that which he may wish to enter, is anticipated.

At the end of the list of licentiates in Dental Surgery is a catalogue of all the Dental Hospitals, Dental Schools, and Dental Societies in the kingdom, with the names of the medical officers attached to each, including a list of the office bearers of the Odontological Society and the British Dental Association.

In the face of all this compilation it may seem ungracious to point out one or two deficiencies, but as the aim of the proprietors seems to be perfection, we feel that what we say will be taken as friendly, and not as hostile criticism. First we could wish to see in the epitome of the laws affecting the medical profession a better *résumé* of the Dentists Act. In no recent legislation has the medical profession been so much misled as in this matter, and a somewhat more detailed account of its provisions in the pages of the *Medical Directory* would be of great value to the profession at large and earn the thanks of the Dental specialists. Again, in the lists of the Dental Societies, we miss the Society of Surgeons practising Dentistry. A periodical list of its office bearers would be both useful and instructive. We cannot ask the editor for a list of its members, as in all probability he would fail in obtaining it if he tried to get it, but an annual list of its office bearers published in the *Medical Directory* might let a little daylight into the constituents of this pretentious body. The Odonto-Chirurgical Society of Scotland is also conspicuous by its absence from the list of Dental Societies, but this we fear is the fault of the office bearers of that excellent institution which we hope may be remedied in the next edition of the *Directory*.

The new *Directory* is, with all its excellencies, distinctly a commercial undertaking, and it is no disgrace to the proprietors to say that their object is to make it pay. If they find, by the sale of their book, that the information they supply is appreciated, they will continue to go to the necessary expense attending its compilation and publication; but otherwise we cannot expect them to continue to give the same prominence to the Dental part of the volume as they have done this year. It is for the profession to decide the question for themselves. The sale of a certain number of copies through Messrs. Ash & Sons has been guaranteed, and other Dental depôts have likewise undertaken to supply their customers, but whether the publication of the Dental list in its present desirable form is to continue, must depend upon the profession at large. It is impossible to ask guarantors to come forward year after year to supply the deficiencies caused by those who should be most interested, and it is desirable that the gentlemen whose names are in the list should be thus plainly apprised of the fact.

THE *Progrès Dentaire* for November contains an interesting account, taken from a lecture of M. J. Simon, of the Children's Hospital, of the death of a newly-born infant from hæmorrhage following the extraction of a small, loose, incisor which had been erupted prior to birth. Compression, perchloride of iron, the actual cautery, were all tried in vain, and the child sank from loss of blood.

MINOR NOTICES AND CRITICAL ABSTRACTS.

The Merits of Soft and Cohesive Gold as Filling Materials.

WE give below an extract from a paper by Dr. A. A. Blount, of Geneva, published in the December number of the *Ohio Journal of Dental Science*, in which he describes his method of filling teeth with soft and adhesive gold combined in such a manner as to obtain the best results of each. Some of our readers will remember that Dr. Blount gave some demonstrations of his practice in London during the Congress week.

In the first place he insists that failures in filling are due quite as often to the use of unsuitable instruments as to imperfect manipulation. He believes that no dentist who uses cohesive or heavy foils can make as perfect a filling with serrated points as he would if he used smooth, oval points, and that to the use of serrated points is to be ascribed the tendency of cohesive gold to draw away from the walls of the cavity and "ball up," which is sometimes complained of. The face of the instrument must be smooth to allow of free lateral expansion of the foil.

Next he calls attention to the fact that the essential feature of a perfect filling is perfect and complete adaptation of the material to the walls of the cavity, and that this is easily obtained with soft gold, but is less certain with cohesive. For this reason, it is not uncommon to see a filling of cohesive gold, apparently as perfect as when first made, but the tooth blackened and decayed around it; and, on the other hand, a filling of soft foil rough and worn, yet with the tooth showing no signs of further decay. The objection to the soft foil is, of course, that a filling made with it will not wear as well as one made with cohesive foil.

Taking these facts into consideration, he came to the conclusion that the best plan would be to put *soft foil* against the walls of the cavity, and fill in with hard, or *cohesive*, foil, thus obtaining the two important desiderata—perfect adaptation to the walls, and a surface that will resist the action of mastication.

Dr. Blount then proceeds to describe his method in detail, as follows:—

"We will suppose our cavity to be an approximal one in a molar or bicuspid: we will commence the operation by lining the cavity, beginning at the cervical wall where we have already pre-

pared it in such a manner as to retain the foundation or starting piece of our filling. Let us begin with *soft foil*, and fill this point thoroughly, allowing the gold to extend over or beyond the border; continue this lining of *soft foil* on the lateral walls until we have reached the grinding surface, all the while allowing the gold to extend beyond the borders as in the beginning.

"If the cavity at the grinding surface is V shaped, line it also. Then we will place a large pellet against the back of the cavity, packing thoroughly but lightly, which will serve to hold the whole in place, and complete the lining process of *soft foil*. We will use the Varney foot instrument with light blows of the mallet, or any other style of instrument with hand pressure, as we may best accomplish the work, but let the pressure be all the time against the *walls* of the cavity.

"Now let us begin again at the cervical wall as before, only this time with *cohesive foil* and *smooth, oval pointed* instruments, placing *over* the soft a layer of cohesive foil of sufficient thickness to insure perfect solidity. After having thoroughly covered the soft with the cohesive foil, finish the borders, especially the cervical border, completely, as this can be accomplished more easily at this stage of the operation than after the filling is completed. This we can most readily do with the *flat* side of our instrument, driving the gold over the edge of the enamel, burnishing it down in such a manner as to insure a complete adaptation of the gold to the edges of the cavity. Now we have completed the most difficult part of the operation, leaving only a plain, simple cavity to fill, which may be done very rapidly, as we have no frail walls to retard our progress, they being already covered and protected. We may use pellets, cylinders, blocks, or any preparation of gold that will fill most rapidly and give the hardest surface and the greatest resistance to mastication."

Effects of Forced Feeding on the Dentition of Domestic Animals.

The following paragraph which appeared in the *Times* is full of interest to the Odontologist, as hitherto no cause other than rickets has been known with any certainty as being able to disturb the rate of evolution of the teeth. There is indeed a great dearth of information upon the subject; no exact comparison for example has been made between the dates of the eruption of the teeth in

civilised and uncivilised races, and it may well be that those periods which we accept as normal, are not normal at all, but are modified by the artificial condition to which both mothers and children are exposed. Those of our readers who may have the opportunity of observing the periods of eruption, and of change of the teeth in the children of uncivilised races, might perhaps light upon facts of the highest interest and significance to the student of the history of the human race: and to establish the fact that certain definite conditions affect the rate of formation of the teeth, would place us one step nearer to understanding the agencies which bring about their degeneration in the present day.

“Quite an excitement has been aroused among the exhibitors by the disqualification of a large number of pens by the veterinary referee, including three entrances of Messrs. J. and F. Howard, two of Mr. Sanders Spencer, two of Captain Philip Green, one of Lord Tredegar, and others. The grounds of disqualification are either that all three pigs in a pen are not of the same litter as they are certified to be, or that they are older than stated in the exhibitor's entry certificate, the evidence being the state of dentition as examined at the time of arrival at the show. There may be a case in which the punishment has been justly inflicted; but exhibitors agree in declaring that, in the bulk of the examples, the disqualification has been practised on an erroneous basis, that the pigs are truly and properly entered according to their actual age, and that scientific authority is at fault in not allowing for the capricious and often wide variations from rule which occur in the changes of the teeth of pigs at nine, twelve, fifteen, and eighteen months old. In Messrs. Howard's case, one pen of disqualified pigs is of a litter from an off farm where they could not have become mixed with other pigs, and the system of records in the breeding-book is such that it seems impracticable that the breeder's herdsman could make any mistake in the separation and identification of litters, or in the ages of any pigs selected for exhibition. In Mr. Sanders Spencer's case, too, the pigs of one pen were farrowed on the 3rd of September, just as the owner began partridge-shooting, and there was no trusting to information of herdsmen or any one else. Upon looking at the mouths of the prize sheep it is found that very great discrepancies appear in the state of their dentition, many of the shearlings having two-shear mouths; and it is contended that in the case of pigs, also, a longer suckling and stimulation of growth with forced feeding produce abnormal developments of the teeth. Probably the stewards will make an inquiry into the whole subject, and not suffer breeders of eminence to remain under the stigma of improper entry of their animals because scientific authorities have assumed too much. If no reconciliation between the observations of the learned and the facts in practice can

be brought about, why not cease to demand certificates of age from exhibitors, and simply classify pigs as conforming to such and such states of dentition?"

The Smoke Abatement Exhibition.

UNDER the above head, the *Lancet* of December 24th gives a summary of an interesting lecture by Mr. Fletcher, one of a series given in connection with the Exhibition:—

"The lecture delivered by Mr. Thomas Fletcher, of Warrington, on Saturday last, was one of great importance, as embodying the views of a practical man and not a mere theorist. Mr. Fletcher's statements should we think, receive very grave attention, because they are evidently in no degree prompted by self-interest. We had occasion in our last notice to make some approving remarks on the gas-burners and gas-cooking appliances exhibited by this gentleman, and it is most important to note that he *does not recommend the use of gas for heating rooms and houses*. "Gas," said Mr. Fletcher, "for heavy continuous work is excessively costly as compared with coal, and where cost is any consideration, its continuous use for heating purposes is to be condemned. Those of you who have, or who have had, gas fires will no doubt be able to bear me out in this point. A really good bright gas fire of the usual form in continuous use will cost as much as at least ten coal fires of equal power in a properly constructed grate."

We regret our space will not permit us to reproduce the whole of the *Lancet* report, which includes a variety of important matters.

Mr. Fletcher considers the combination of gas and coke disadvantageous, coke alone being preferable. The only way to diminish the dirt of London fogs—an important matter to the dentist,—is to lessen the consumption of coal to a minimum. To produce a clear and smokeless fire, the glowing fuel should be surrounded with bad conductors, metals should be avoided.

He recommends therefore that ordinary metal fireplaces should be lined and plastered with common fireclay mixed with a solution of silicate of soda, and he further insists that the space beneath the bars shall be built up with bricks, and that the bottom of the grate (above the bottom bars) shall, equally with the back and sides, be plastered with fireclay; which can be done at a trifling cost.

A New Antiseptic.

Professor Barff has recently succeeded in forming a compound of glycerine with boracic acid in the proportion of 92 parts of the former to 62 of the latter. Prolonged heat, a little short of the boiling point of glycerine, is necessary to dissolve the boracic acid; on cooling, the substance is a tough deliquescent mass, soluble in water and in alcohol. It is a new chemical compound, named by the patentee boroglyceride, and is a powerful antiseptic. For general purposes a solution of one part to forty parts of water is recommended; but it may, perhaps, be found useful for dental purposes in its solid form, or in solutions of much greater strength.

Ointment &c. of boracic acid have been employed with excellent effect by Professor Lister and others, but this new compound promises to be a more powerful preparation than any previously in use.

REPORTS OF SOCIETIES.

Odontological Society of Great Britain.

THE Annual General Meeting of this Society took place at its rooms, at 40, Leicester Square, on Monday, the 9th inst.; Thos. A. Rogers, Esq., President, in the chair.

On taking his seat, the PRESIDENT declared the ballot open for the election of officers for the ensuing year; Messrs. A. G. Hockley and Willoughby Weiss were chosen to act as scrutineers.

Mr. HENRY SEWILL showed casts of a remarkable case of enlargement of the external alveolar wall of the upper jaw; the bony mass was most marked over the molar teeth. The patient was a gentleman aged 39, and, so far as Mr. Sewill could learn, the enlargement was not now increasing.

With reference to some cases of projection of the front teeth in women, to which he had called attention at a previous meeting, Mr. SEWILL now showed a model of a case in which an upper lateral was the only tooth affected. There was no absorption of the alveolus, nor any indication of disease of any sort.

He also mentioned the case of a young lady, aged 15, who had come to him some time back with an upper temporary central incisor still in place. As the tooth was very loose, Mr. Sewill removed it, but its permanent successor had not yet appeared, and

he had therefore just fitted an artificial tooth in its place. In this case the friends were rather disposed to blame him for having removed the temporary tooth, and he was anxious to learn what was the general opinion of members respecting the proper course to pursue in such cases.

At the April meeting he had related a case in which paralysis of the parts supplied by the inferior dental nerve had followed the extraction of a lower wisdom tooth. Up to June, when the patient went away into the country, but little return of sensation had taken place. But when Mr. Sewill saw her again on December 9th, he was pleased to find that almost complete recovery had taken place; there was still slight impairment of sensation, but practically the patient might be considered to have got over her trouble. He lastly handed round a model showing the harm that might be done by operating for the cure of cleft palate in unsuitable cases. The result of the operation in this instance had been to leave the patient in a worse condition than she had been before.

Mr. HUTCHINSON thought it was generally safer to leave temporary teeth in the mouth. He had known several cases in which temporary teeth had been removed and the permanent had not appeared. He had now a patient, aged 35, one of whose temporary canines was still in place and useful.

Mr. CHARTERS WHITE related the case of a girl, aged 24, whose upper temporary canines were in place, though the permanent canines were also erupted. Mr. White removed the former; they were pretty firmly attached, but on examining them he found that the roots were absorbed.

Mr. COLEMAN thought that the best treatment in such cases was to fit a plate with artificial teeth; the pressure of the plate had a very good effect in hastening the eruption of the permanent tooth.

Mr. MARCUS DAVIS said that on one occasion he had a subject for dissection, apparently about 50 years of age, in whom one of the second temporary molars was still in place. Mr. Davis made a section of the bone below it in order to ascertain whether the permanent tooth was present. He found the space in which it should have been, but there were no signs of the tooth itself.

The PRESIDENT remarked that no general rule could be laid down for these cases, each must be treated according to circumstances. Considering that in Mr. Sewill's case the tooth was so

loose that he was able to remove it with his finger, he thought he was perfectly justified in so doing.

Dr. STERNFELD showed some beautiful microscopical specimens, illustrating the structure and development of the teeth of the common pike, and gave a description of them. The purpose of the specimens and of his remarks was to prove that the crown of the pike's tooth was really composed of vaso-dentine, although it had been described by Mr. Charles Tomes as being composed of osteo-dentine.

Mr. F. CANTON and Mr. CHARTERS WHITE bore witness to the great beauty of the specimens, which had evidently been prepared and mounted with extreme care, and the latter added that as the result of his examination of them, he thought they quite bore out all that Dr. Sternfeld had stated in his description.

Dr. STERNFELD also read notes of an interesting case of very large fibro-cystic tumour involving the left half of the lower jaw, and showed photographs of the patient before and after the operation. The bone was sawn through in front, disarticulated behind, and removed with the tumour. The patient made a good recovery, and, although two years had now elapsed since the operation, no recurrence had taken place.

Mr. HOWARD MUMMERY then read an abstract of a paper by Mr. C. W. Dunn, of Florence, entitled "A Study on Diseases of the Teeth." After remarking on the very unsatisfactory explanations which had been given to account for the marked difference which is seen in the teeth of civilized and uncivilized races, and alluding to the fact that even among civilized races some have their teeth more and some less diseased, Mr. Dunn said it had occurred to him that some information might be gained by printing a series of questions and sending them to the communal doctors in the most remote and little known parts of Italy. That kingdom contains a population subject in different localities to very different conditions of life. On the coast of the mainland, and also of the islands, Sardinia, Sicily, and Elba, the inhabitants eat much fish. In the cities more meat is consumed; whilst in the country districts many live almost exclusively on Indian corn flour, chestnut flour, or rice, and very many eat neither meat nor fish. The variations in soil and climate are almost as great, including low marshy plains and elevated mountainous districts, some land of wonderful fertility and some bare and sterile.

With the assistance of a friend, Signor Caloetti, the following series of twelve questions was drawn up and extensively circulated:

1. In the locality frequented by you, which disease of the teeth predominates, Caries or Periostitis? Do young children suffer from either of these diseases?

2. Is the population in general robust or weakly?

3. Have you been able to observe whether the teeth of those living in towns and cities are better than those living in the country?

4. Which suffer more from the teeth, the inhabitants of the plains, or those of the hills?

5. Are there mines in your neighbourhood? Please state the nature of them. Have you been able to observe whether those working in the mines suffer more or less from their teeth than others living in the neighbourhood?

6. What is the usual drink—beer, spirits, wine, or anything else?

7. Do the people smoke much or chew tobacco?

8. What is the usual daily food?

9. Are there forests, bogs, lakes, hills, or downs in the neighbourhood?

10. Is there any tendency in the teeth to become loose at an early age?

11. On what soil or formation are you?

12. Can you make any special observations on the formation of the enamel; the shape, size, and regularity of the teeth; or any other observation which might be interesting?

To these questions he had received 44 complete set of answers, and of these he gave an analysis. In 22 places caries was said to be rife; these included the districts of Bologna, Palermo, the Waldensian Valleys, Verona, &c. The causes assigned were marshes, rice grounds, malaria, stagnant waters, excessive irrigation, lead mines. Scrofula and anæmia predominated in these districts; food often poor and scarce. In 14 places there was said to be little caries; these were for the most part situated on gravelly soil, or in the vicinity of the sea, or they were mountainous districts. There were only four places where the teeth were said to be good; of these Ferrero, in Piedmont, is 1,500 metres above the sea-level; the others were Bergamo, Bordeaux in France, and the vicinity of Athens. All agreed in saying that those who worked in the open

air generally suffered little ; thus shepherds and charcoal-burners had good teeth.

As regards food, the chief difference was that, where good teeth existed, the people were said to be temperate, drinking wine only and no spirits ; in districts where caries was common, the people drank spirits, liqueurs, wine, and beer. Smoking did not appear to predispose to caries.

Mr. DUNN admitted that the facts as yet received were too scanty for the formation of any precise conclusions, but he thought they were not without interest ; he offered them as a contribution towards a better knowledge of the subject, and in the hope that others would carry out enquiries in the same direction.

The PRESIDENT said that Mr. Dunn had collected some very valuable information, but he thought that the ground covered by the questions might be extended with advantage. He explained that the reason why the paper had been read in abstract was that it had already been presented to another Society, the Anthropological Society of Florence, and it was contrary to the rules of the Society that papers should be read there which had been previously discussed elsewhere.

Mr. PARKINSON then read his report as Treasurer. The receipts during the past year had been £557, and the expenditure £364, leaving a balance of £193—a larger surplus than he had ever been able to report before. For this they were largely indebted to the exertions of Dr. Walker, who had, by careful management, succeeded in materially reducing the cost of the Transactions.

Mr. WEISS, as Librarian, also handed in a very satisfactory report. He called attention, however, to certain deficiencies, which he hoped might be supplied. The first volume of the "British Journal of Dental Science" was incomplete: he had only an imperfect set of "The Forceps." The "Transactions of the Society of Arts" for the year 1826 was a desideratum, and so was a copy of Mr. Chitty Clendon's work, and there were some other omissions in the catalogue which he should like to see rectified.

Mr. HUTCHINSON announced that the Museum was now in perfect order ; the new catalogue had been printed, and a copy would be sent to every member with the January number of the "Transactions."

The Scrutineers announced that the list of office-bearers

proposed by the Council had been unanimously adopted. It is as follows :—*President*, Samuel Lee Rymer, Esq. ; *Vice-Presidents*, Messrs. J. S. Turner, Chas. S. Tomes, and Henry Moon, (*resident*) ; and Messrs. J. E. Rose, of Liverpool, Walter Campbell, of Dundee, and William Doherty, of Dublin, (*non-resident*).

Messrs. James Parkinson, Felix Weiss, and S. J. Hutchinson, again occupy the posts of Treasurer, Librarian, and Curator respectively. *Hon. Secretaries*, Messrs. J. Howard Mummery (*Foreign Correspondence*), F. Canton (*Council*), and T. F. K. Underwood (*Society*). *Council, Resident Members*, Messrs. Charters White, G. Wallis, W. F. Henry, A. Coleman, J. Stocken, Dr. Walker, I. I. Lyons, G. A. Ibbetson, and A. Gibbings. *Non-resident*, T. J. Browne-Mason (Exeter), W. Williamson (Aberdeen), J. E. Palmer (Peterborough), William Fothergill (Darlington), A. Jepson (Leamington), and Martin Magor (Penzance).

The PRESIDENT then proceeded to deliver his valedictory address, consisting of a retrospect of the events of the past year. Fears had been expressed at its commencement that the supply of papers would suffer from the competition of the Congress, but no inconvenience had arisen from this cause. Amongst those with which the Society had been favoured, those of Mr. Charters White on the Gustatory Organs of the Tongue, of Mr. Stocken on the value of Constitutional Remedies in the treatment of certain Dental Affections, of Mr. David Hepburn on cases of Suppuration having a Dental Origin, of Dr. Richardson, and of Mr. Coleman, amply sufficed to place the session just passed on a level with any that had preceded it. In the early part of the year a long-pending question had been decided, and the "qualification law" would come into operation next November. It might be advisable to mention that June 5th would be the last occasion on which undiplomaed candidates could be elected, and that therefore all such as might be desirous of joining must be proposed not later than March 6th.

After referring to the satisfactory nature of the reports which had just been read by the Treasurer, Librarian and Curator, and remarking upon the services which had been rendered to the Society by Mr. Willoughby Weiss in arranging the museum and drawing up the descriptive catalogue, Mr. Rogers went on to mention the changes which had taken place in the Society during the past year. Sixteen new members had been elected, and four

had died during the year. The losses included Mr. Norman King, of Exeter, Mr. Isaac Sheffield, and Mr. Normansell; the death of Mr. Napier, formerly a Member of the Society, was also noticed, and that of Mr. J. Crooks Morison, who although not a Member, was well-known to, and deeply regretted by, many of those present.

Mr. ROGERS then alluded to the additions which had been made to dental literature by Mr. Oakley Coles, Mr. Coleman, and Mr. Arthur Underwood, and to the appearance of the *Dental Record*. Amongst the events of the year must also be mentioned the election of Mr. E. Saunders to the presidentship of the Metropolitan Counties' Branch of the British Medical Association, and of Mr. Charters White as President of the Queckett Microscopical Club, the one as the successor of Andrew Clark, John Wood, and Habershon, the other of such men as Lionel Beale, Huxley, and Cobbold. But of course the great event of the year had been the Medical Congress—a subject which he felt it was impossible to treat of adequately in such an address as that which he was then called upon to deliver. Each individual was probably most impressed with that one of its aspects which most nearly affected himself, whether philosophical or practical; for himself, he bore in chief remembrance the clear, yet profound exposition of his views upon Dental Education and its relation to general medical education, so ably put forward by one of the chief actors in our great educational movement.

In conclusion, Mr. Rogers congratulated the Society on its selection of his successor, the first-fruits of the new law which enlarged the choice of presidents. As for himself, some of his closest friendships had arisen out of his work in the Society, and many would be the pleasant associations in connection with it which he should bear away and hold in remembrance as long as memory should last.

Mr. IBBETSON, in an excellent speech, proposed a hearty vote of thanks to the retiring President. This was seconded by Mr. J. R. MUMMERY, and carried with much applause.

The PRESIDENT, in returning thanks, acknowledged his obligations to the Secretaries and other officers of the Society, and moved that the thanks of the Society be given to them.

This having been carried by acclamation, Mr. PARKINSON replied, and the Society then adjourned.

Odonto-Chirurgical Society of Scotland.

At the Meeting of this Society, held December 8th, Andrew Wilson, Esq., Vice-President, in the Chair, a paper on Vulcanite Dentures was read by Mr. J. Austin Biggs.

After referring briefly to the efforts which had been made since the first introduction into this country of rubber for dental purposes, by Mr. Putman twenty-six years ago, to improve the machinery necessary for its manipulation, he came to the conclusion that a good deal still remained to be done. As regards vulcanizing, great efforts had been made to save time in the operation, but he believed that this had only been gained at the expense of diminished elasticity, density and durability in the vulcanite; as regards flasks and clamps, the general fault was that they were too complicated in design and too weakly constructed; whilst comparatively little had been done to improve the original method recommended for the modelling-up of cases, flasking, packing, &c.

Beginning with the cast, Mr. Biggs insisted on the importance of having fresh, crisp plaster, entirely free from any admixture. Additions should never be made to old casts, since fresh plaster never makes a thorough union with plaster already set, and the older the set piece, the more imperfect would be the union; so also in flasking a case it was important that the mould should consist of one piece, or be made in as few divisions or mixtures as possible.

An imperfect fit was often due to a slight yielding of the flask when pressure was applied, and considering the thinness and material of which many of the flasks in use were composed, it was almost a matter of surprise that cases made under such conditions should fit at all. In his opinion cast-metal and gun-metal were useless materials to make flasks of: the one was liable to fracture, and the other to twist out of shape. Mr. Biggs then showed a flask of his own design, which had been in use for some years, made of malleable cast-iron, strong and thick, and described his mode of proceeding as follows:—

“ Having a reliable flask, I next devised a means by which the model and setting might be made in one piece, which I achieved in this way—I take a piece of ordinary pink wax, soften it in hot water, and press it up to fit the bite-model—this must be very accurately done, and that, too, without thinning the wax—pressing

up the rugæ carefully with a burnisher or other convenient instrument; mount the teeth upon this, and try in if necessary; if all is correct, heat again in hot water, and press up carefully, then cool it in cold water. Stiffish plaster is then mixed, and the first part of the flask half filled. The case is now inverted and filled, reverted and inserted into the plaster in the flask. The plaster is then built up to and over the edges of the teeth. When hard it is soaped, and the other half closed and lightly clamped. When hard, open and wash out, and we have then a mould composed of but two pieces. This may now be packed with the absolute certainty of being a *fac-simile* of the wax set in every particular when vulcanised.

"I claim for this method a vast saving of time, trouble, and material, and also a more accurate fit. The time and trouble of taking a duplicate is avoided; the permanent model is retained; the bite is very rarely disturbed; there is very little superfluous rubber wasted; and the case requires much less time and trouble in finishing; the piece slips into its place in the mouth without the usual touching up; the vulcanite not being forced into unnecessary under-cuts and interstices, as when vulcanised upon a model.

"I also hit upon a plan of diceing the fitting surfaces of cases, which is very simple, ornamental and useful, helping to steady and increase the suction of a case, and having the further advantage of precluding the possibility of the surface being tampered with without detection. This is accomplished thus:—Take a piece of netting the pattern of the plate, and a piece of tissue-paper of the same size, place the tissue-paper on the netting, and the netting on the model, before closing the flask. They both become embedded in the vulcanite, but will wash off with a brush when vulcanised, leaving a much cleaner surface.

"I am indebted to Dr. Best, of London (formerly of America), for a hint, which I hope he will pardon me giving to those gentlemen present who do not know it—namely, how to acquire the best adhesion in complete suction cases. By scraping the model all along the labial margin of the gums (avoiding the buccal muscle), then along the lingual margin, and finally across the distal margin of the palate, using afterwards a piece of very fine sand-paper, it will be found that the suction of a case made from a model thus treated is far greater than that acquired from the use of discs, chambers, scratches, or other like contrivances. Having the further advantage of strength and appearance, the device of carving the rugæ on the lingual side of the case helps also to

strengthen and embellish a case, and is rather more pleasant to the wearer. I have here several pieces in plain and gum teeth. Those with the gum teeth are constructed by myself personally, after the manner explained above. I use very large wheels in cutting the blocks, and cut all on the large flat surface of the stone, instead of on its edge, and I never use paint. The long, clean, regular cut makes the joints look closer and better. I should like to have shown those gum cases in the mouth, feeling satisfied it would help to stimulate others who do not use them to an endeavour to do so in future, as far as practicable.

"A great deal is being said at present as to the immense advantage to be gained from the use of celluloid, because of its lightness, colour, and rapidity of manipulation. Celluloid undoubtedly looks well in the hand when new, but never looks like the gums in the mouth, and if used by a constant smoker, very soon assumes an appearance scarcely recognisable from black rubber, which, for a gum, is most unattractive. It is at no time capable of bearing comparison in the mouth with the beautiful gum blocks manufactured by Mr. White of Philadelphia, either for colour or translucency—this much being admitted by even the greatest advocates of celluloid,—as they generally use it in combination with gum teeth."

In conclusion Mr. Biggs said that, in his opinion, too little attention was being paid to æsthetic culture in the mechanical portion of the professional education of our dental students. Were they recommended to study Drawing, Painting, and Modelling, we should shortly see a great deal less of the incongruities that so often offend us.

Some interesting cases having been brought forward by Messrs. Finlayson, Wilson and Watson, the Chairman announced that the next meeting, on January 12th, would be devoted to the discussion of Mr. Biggs' paper, and to the consideration of cases in practice, models, drawings, &c.

The meeting was then adjourned.

WE learn that the Articulating Paper manufactured by Messrs. Field & Tuer is now coming into extensive use, both in this country and in America: it is made in two grades, thick and thin.

DENTAL NEWS.

Dental Hospital of London.

THE Annual Dinner of the Past and Present Students of the Dental Hospital of London took place at St. James's Hall on the 2nd ult., Mr. EDWIN SAUNDERS in the chair. About a hundred sat down, including the Members of the Medical Committee and of the Hospital Staff.

The usual loyal toasts having been duly honoured, Mr. SAUNDERS gave that of "Past and Present Students." Such gatherings as that over which he presided gave opportunities for the happy reunion of friendships which had lent a charm to student life. No friendships were so lasting as those founded on an intellectual basis, and which had arisen from community of thought or pursuit. This was not only a bond of union between fellow students, but also between professor and pupil. And in like manner the student acquired a love for the institution itself as the kind mother to whom he was indebted for the knowledge which fitted him for his career. And as a man thinks of his mother as something apart from and above ordinary womanhood, so the student, though his hospital or school may not in general estimation be placed in the first class, still believes it to be the best possible, and refuses to judge it by ordinary standards. No such reservations, however, were needed when speaking of the Dental Hospital of London, for, both in regard to its structural arrangements and professorial strength, past as well as present, it might safely challenge comparison with any similar existing institution. Ample proof had been afforded during the recent International Medical Congress that the school was able to hold its own with the most dexterous operators of the old and new world.

Mr. WILLIAMSON, in replying on behalf of the past, and Mr. HERN, on behalf of the present students, spoke gratefully of the interest taken by the staff in the welfare and professional advancement of the pupils, and of the ready manner in which they responded to the demands made on their time and patience. The opportunities afforded them during the Congress week of judging of the relative merits of transatlantic work, had given them every reason to be satisfied with the skill and method of their present teachers.

Mr. UNDERWOOD proposed the toast of "The Dental Hospital

and Staff." He referred to the establishment of the Hospital twenty-three years ago as a most important event, since it, for the first time, rendered possible the systematic instruction of the future representatives of the Dental profession. Considering what the majority of those present that evening owed to the Dental Hospital, it could be easily understood what were the feelings of the promoters of the scheme. Dental Students now had advantages which in his young days were not thought of, and he was sure that the great sacrifice of time and labour made by the staff for their benefit would be appreciated by them as it deserved to be, and especially by those who had begun to experience the labours and anxieties of private practice.

Mr. ALFRED HILL, in replying on behalf of the Staff, said they endeavoured to perform their duties to the best of their ability. The Chairman had shown them an example in this respect; from the very first Mr. Saunders had contributed his time, consideration, personal influence, and material assistance, and he—Mr. Hill—was glad of that opportunity of thanking Mr. Saunders, on behalf of the Staff, for his untiring efforts for the maintenance of the Dental Hospital of London in full efficiency. A further incentive was afforded by the fact that their Hospital was not only, as a public institution, under the scrutiny of the public, but was also the centre of attraction for practitioners of all nations when visiting the metropolis. Only a week previously he had the pleasure of conducting an American practitioner, residing in St. Petersburg, over the Hospital. This gentleman had come to make inquiries as to their *modus operandi*, with the view of laying the information before his fellow practitioners at St. Petersburg, where they wished to found a dental hospital on the basis of the Dental Hospital of London. He was glad to say that the staff fully recognised the fact that the strength of the entire body was in exact proportion to the amount of cohesion between its separate particles; up to the present time, they had worked together in perfect amity, and he hoped that no one would be evil intentioned enough to throw the apple of discord amongst them.

Mr. CARTWRIGHT, in proposing "The Prosperity of the Medical School," remarked that the continued success of a school depended entirely upon the sort of instruction given in it. He thought they had good reason to be proud of their pupils as a class, since they had, for the most part, not only shown themselves industrious and exemplary students, but had turned out successfu

practitioners. He had been glad to see that at the late International Congress two of the papers which proved of exceptional interest and merit, and commanded the attention of the whole section, had been read by gentlemen who were formerly students at the hospital. As in other professions, so in theirs, the amount of knowledge required from students was gradually being increased, and to meet this it had been found necessary to supplement the work of the lecturers by appointing demonstrators and a medical tutor, the benefit of which had been made very apparent by the better results obtained at the examinations of the Royal College of Surgeons.

Mr. C. S. TOMES having replied,

Mr. ALFRED WOODHOUSE proposed "The Health of the Chairman." After alluding to the advantages which the students of the Dental Hospital now enjoy compared to those which were his lot when a student, he pointed out the large share which the Chairman had taken in bringing about this state of things, and in particular that to his exertions was largely due the present admirable building in Leicester Square. Mr. Woodhouse referred also to the high honour now enjoyed by Mr. Saunders as president of the Metropolitan Counties Branch of the British Medical Association, an honour which was to some extent reflected upon the branch of the medical profession to which he belonged, and remarked that he had added still more to their debt of gratitude to him, by acting as their chairman that evening.

Mr. SAUNDERS, in responding, thanked Mr. Woodhouse for the compliments he had so graciously bestowed upon him, and the company for the hearty manner in which they had received the toast. When he was asked to preside, he could not help feeling some misgivings, remembering how ably the chair had been filled on previous occasions by some who were better known to the students than himself. It had, however, given him great pleasure to preside and to witness the fraternisation which took place between past and present students.

Mr. F. CANTON having proposed "The health of the Visitors," to which Mr. W. J. Milles replied, "The health of the Dean," Mr. T. F. K. Underwood followed, and lastly an acknowledgement of the services of Mr. David Hepburn and his friends in providing an excellent programme of music during the evening.

National Dental Hospital.

WE regret that we were unable to notice in our last issue the Annual Dinner of the past and present students of this hospital, which was held at the Guildhall Tavern, on November 16th. About seventy sat down, Mr. S. Lee Rymer occupying the chair.

After the usual loyal toasts, MR. W. H. ASH proposed the "Committee of Management," referring to the improvements which had recently been carried out in the hospital premises as satisfactory evidence of its well-directed energy.

Dr. STRONG having replied, the CHAIRMAN gave "the Medical Profession," coupled with the names of Dr. Alfred Carpenter, and Dr. B. W. Richardson, alluding to the services which these gentlemen had rendered to the dental profession in the early days of the reform movement.

Mr. STEPHEN HOOLE proposed in very complimentary terms "the Health of the Hospital Staff," to which Mr. Williams responded.

Dr. ALFRED CARPENTER, in proposing "the National Dental Hospital and College," remarked that the chief object of medical science now was to ascertain the causes of diseases and the best modes of preventing them, and a good deal had already been learnt on this subject. He hoped that the time was not far distant when, through the agency of such institutions as the National Dental College, similar knowledge might be obtained with regard to the causes and prevention of dental caries.

Dr. ATKINSON, of Kew, proposed "the Past and Present Students," and in the course of his speech quoted, from an old Persian Chronicle, a successful case of Cæsarian Section, said to have been performed with the aid of some anæsthetic drug, about A.D. 950.

Mr. STOCKEN in proposing "other Dental Schools," referred to the increase in their number which had lately taken place, as an augury boding well for the future of dentistry. The public required a larger number of educated practitioners, and the healthy rivalry which would result would act as a stimulus in keeping both teachers and pupils up to their work.

Mr. OAKLEY COLES proposed the health of the Chairman: he spoke of the way in which Mr. Rymer had originated the scheme of the College of Dentists, and then at a later date, when he saw that unity in the profession was necessary, had helped to bring

about its amalgamation with the Odontological Society. He was one who had always placed the interests of the profession above all other considerations, and was an example which the younger members of the profession might well follow.

The proceedings were enlivened by some good vocal and instrumental music, Mr. Chas. Davieson officiating at the piano.

Annotations.

THE number of cases treated at the Dental Hospital of London during the month of December, amounted to 2,275. Of these 995 were extractions, 369 being performed on children, and 253 under nitrous oxide; 87 gold fillings were executed, and 425 with other materials; 91 cases of irregularities, and 424 miscellaneous and advice cases complete the list.

At the National Dental Hospital, during the same month, there were 710 extractions, 254 children and 456 adults; nitrous oxide was given in 114 cases; 26 gold and 262 other stoppings were executed; the cases of irregularity were 34, advice and miscellaneous 293, making a total of 1,439 cases.

A somewhat sensational story has lately appeared in the daily papers, of a man whose life was said to have been saved by the false teeth he was wearing. He was shot at by his brother-in-law, and it was stated that the course of the bullet was diverted by glancing on the palate of his silver denture: this was produced in court, and the indentation made by the ball carefully pointed out. But on enquiry at St. Bartholomew's Hospital, we learn that the bullet never touched the denture at all; it entered close to the nose, passed through the antrum and lodged in the temporal fossa.

We are informed, however, that a case did come under Mr. Coleman's notice at the same hospital some time back, in which a woman apparently owed her escape to her teeth. The weapon in this case also was a revolver; the ball carried away six front teeth, and then dropped harmlessly into the sulcus between the jaw and the cheek.

WHILST arsenious acid, and the less well-known arsenic acid, are

reliable agents for the destruction of the pulp, and are found when used with reasonable caution to be safe, it nevertheless does occasionally happen that an untoward result, such as an unmanageable periostitis, unaccompanied with the smallest indication of septic conditions, follows its use. Such cases, though very rarely involving the loss of the tooth, render the discovery of other agents capable of rapidly, and if possibly painlessly, destroying the pulp, a thing to be desired, and the valuable paper read by Dr Arkövy at the International Medical Congress, will serve to direct much attention to an agent the use of which was some years ago suggested, viz.—Pepsin.

It was then supposed that its action would be limited to the removal by digestion of those parts only which had had their vitality lowered by disease, but according to Dr. Arkövy it acts powerfully upon the whole of a healthy pulp, reducing it to a condition which he compares to coagulated albumen, breaking up the blood corpuscles and depriving the blood of its fluidity. It has this peculiarity, which is not at all shared by arsenious acid, that the limit of its action, when an insufficient quantity has been applied, is indicated by a well defined line of demarcation. There would thus appear to be but little chance of its action extending beyond the apical foramen. It may be mentioned that under the name of "Pepsin," several materially different substances are sold. That which is sometimes offered, is little else than the glandular layer of a pig's or calf's stomach dried at a low temperature, and sugar or starch added, and this though tolerably rich in pepsin, would contain of course much else, and be far less energetic than pure pepsin, which can only be obtained by a somewhat elaborate process. Dr. Arkövy's experiments were conducted with the "purest German Pepsin," but this may merely mean the preparation of the German Pharmacopeia, which, like our own, is diluted (with sugar).

List of those who have promised Contributions to this Journal during the year 1882.

We have to thank the following gentlemen, amongst others, for promises of literary contributions and assistance during the current year:—

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Books and Papers received.

UEBER Exarticulation des Unterkiefers zur Entfernung von Tumoren, von Dr. A. Sternfeld (Graduation Thesis, Erlangen). Dental Record. London Medical Record. British Medical Journal, 1880. Ohio Journal of Dental Science. Johnston's Dental Miscellany. Lancet. Medical Times and Gazette. Gazette Odontologique. Missouri Dental Journal. Pharmaceutical Journal. Dental Register. Transactions of the Odonto-Chirurgical Society. Progrès Dentaire. British Journal of Dental Science. L'Odontologie. Vierteljahresschrift des Vereins deutscher Zahnkünstler, &c.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.
 P.O. Orders must be accompanied by Letters of Advice.
 Communications intended for the Editor should be addressed to him at 40, Leicester Square.
 Subscriptions to the Treasurer, 40, Leicester Square.
 Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

SUBSCRIPTIONS.

Members are reminded that Subscriptions for the current year are now due, and are particularly requested to forward them without delay to the Treasurer, at 40, Leicester Square.

THE JOURNAL

OF THE

BRITISH DENTAL ASSOCIATION

A

MONTHLY REVIEW OF DENTAL SURGERY.

No. II.

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VOL. III

The Scientific Prospects of the Year.

WE discussed last month at some length, the prospects which the year 1882 offers to our Association, chiefly with reference to matters political. A brief sketch of the Scientific prospects of the new year is not only necessary to complete our survey, but will, we trust, be also useful and suggestive.

We should expect the year now entered upon to be one of unusual Scientific activity. Such a gathering as that which took place in London last August is not only a grand opportunity for the diffusion of knowledge already gained, but is even more valuable as a starting point in the pursuit of further discoveries. In the broaching of new subjects, and even in the re-discussion of old ones, valuable hints and suggestions are dropped, the seed is sown under the most favourable circumstances, and the labour of raising a new harvest is at once entered upon.

There is indeed a wide field for us all to employ our varied abilities upon. In the domain of Anatomy and Physiology,

the new edition of Mr. C. S. Tomes' "Manual," long anxiously expected, not only shows a considerable advance in our knowledge since the first edition appeared, but also serves to indicate how much remains to be done.

M. Magitôt in his latest contribution to the "Journal de l'Anatomie et de la Physiologie" has suggested several points for investigation. He has discovered a distinct cement organ in certain herbivora; he has suggested a new and very plausible theory of the calcification of dentine, maintaining that the osteoblast is not itself calcified, but only modifies the calcification of surrounding material. We hope to hear more of Mr. Coleman's ingenious theory of the conditions which determine the eruption of teeth, namely, that the process is due to the general growth of the bone, carrying with it the contained teeth. And we are still quite in the dark with regard to the cause and morphology of supernumerary teeth. These, and many other points too numerous and important for discussion now, must be carefully thought over and worked at in our laboratories during the ensuing year.

Turning to Dental Pathology we shall expect to see during the year in a completed form, the results of Messrs. Underwood and Milles' investigations into the causation of caries. It is now six months since the Congress heard the first of this "septic theory," and we are able to state that since then the authors have obtained some very conclusive results quite confirmatory of their original views. We have also reason to know that others are working at the same subject, on a different line of inquiry, yet tending in the same direction.

Our friends in Dublin are not idle; we understand that an investigation is being carried on there into the connection between morbid conditions of the teeth and those of the eyes; whilst not long ago a kindred subject was started

by Dr. Sexton, in an American contemporary, namely, the pathological relationship between diseases of the teeth and those of the ear. Such vexed questions can be most effectively studied at hospitals, and in this connection we would strongly urge among the improvements of 1882 that more attention should be paid to the systematic record of the valuable statistics of experimental dental surgery which are constantly obtainable at the Dental hospitals. Surgeons and demonstrators should be able to enforce that the precise details of any novel or interesting case should be carefully kept in the form of notes by the student attending it.

We hope that our chemical friends intend supplying us with some really satisfactory plastic filling, and trust that the stimulus of the liberal reward offered by Mr. Fletcher, of Warrington, will conduce to the more speedy attainment of good results in this direction.

Again, we have for a long time past heard most conflicting accounts with regard to the merits of celluloid; surely the time has arrived when some unprejudiced authority on Dental Mechanics should be able to inform us definitely whether it is a reliable material or not.

Lastly, the operations of replantation and transplantation have shown new signs of life after lying pretty well dormant for a long time. The real value of these must be carefully ascertained. M. Magitôt's results are really wonderful, and if other operators had been as successful and as careful in recording results and following up their cases, it would not be difficult to arrive at a satisfactory conclusion. But this is far from being the case at present. On the one hand, some who have practised these operations confess to having been singularly unfortunate, whilst many of the successes claimed by others are almost valueless owing to the omission from the record of important particulars. We

have even heard of cases being regarded and published as "successful" because the patient never came back after the operation! If our professional brethren would be at the pains to note the result of such cases after the lapse of eight or twelve months, or longer, the statistics thus obtained would form a valuable contribution to our professional knowledge. To such contribution our columns are always open; we hope we may receive many during the year, and that at its close we may be able to record a real and material advance in the position of our profession as regards increase both of knowledge and skill.

The Profession in France.

AT last there seems a fair prospect that the dental speciality in France will be brought out of the unorganised condition in which it has too long rested, and will be placed in its proper position, with legal recognition, as a special branch of the medical profession. This promising outlook has been entirely brought about by the labours of the *Société Syndicale Odontologique de France*, a Society which was founded some three years ago with the objects of promoting the much needed reform of the profession, and of obtaining the necessary State aid and control. Among the most active of the members of this Society are Drs. Amyot, Andrieu, Brasseur, Colignon, and Gaillard, graduates of the University of Paris, and Dr. Mordaunt Stevens, M.R.C.S., a well-known old pupil of the London Dental Hospital. We shall not be far wrong in styling these gentlemen the mainspring of the important undertaking which promises to end so favourably, and we believe we are justified in giving Dr. Stevens credit for furnishing more than the average share of impulse to the movement, whilst his intimate acquaintance with the Dental Institutions and laws not only of this country, but also of America, has proved invaluable to his French colleagues in their labours.

The Society having succeeded so far as to obtain the attention of the Government, the Minister recently received a deputation consisting of the above named gentlemen to confer on the question of Dental Reform. The deputation was prepared with a project of a Dental Bill in essential points the same as the English Dental Act, and with a scheme of Dental Education for candidates for the Dental Diploma, practically identical with the English curriculum. These proposals were submitted by the Government to the *Faculté de Médecine*, who appointed M. Le Fort to report on them, and his report being favourable, there need be no doubt that, although it has not yet been discussed, it will, in time, be substantially adopted by the *Faculté*, and confirmed by the legislature.

The labours of the *Société Syndicale* have been vehemently opposed throughout, first by an active party in the Dental profession who endeavoured to found an Independent Dental Institute, with State authority to direct Dental education and to confer diplomas; and secondly, by a body of Medical Graduates, who desired to forbid the practice of Dentistry to all but fully qualified medical men. Each of these parties employed arguments in support of their views curiously similar to those adopted by corresponding bodies in the profession in England during the discussion of Dental Reform; and it says much for the common sense of the *Faculté de Médecine* that they should have so far adopted the scheme of the *Société Syndicale*.

If imitation be the sincerest form of flattery, English Dental reformers may, indeed, feel flattered by the reception which has been thus accorded to what are essentially their ideas by a body so critical and conservative as the *Faculté de Médecine*. Nothing can more strongly confirm the wisdom of these ideas than their adoption by the intelligent foreigner. And let it be remembered, that the French genius, unlike the English, always objects to compromise of the kind that has been necessary in Dental reform, and in carrying out ideas, is in most cases content only when these are moulded on a rigidly logical basis. Logically, of

course, it may be reasoned and with plausibility that practitioners of Dental surgery ought to possess the same qualifications as medical specialists in other departments of practice ; but the fact remained, that the public demand for fairly qualified Dentists far exceeded the supply, and there was no means of meeting this urgent want, except by the institution of a distinct Dental education and diploma ; and this fact has been recognised by the *Faculté*. Arguments have been used in France, as they were in this country, which, when examined into, amount to the statement that Government is bound to protect the privileges of a profession, however detrimental to the public interests such privileges might prove ; but it is satisfactory to find that statesmen in France, as here, have fully recognised the truth that professions exist only for the use and benefit of the community, and the Legislation which the State can be called upon to enforce with regard to them is exclusively confined to such measures as tend to the general public good. To prevent any but fully qualified medical men from practising as Dentists, would be to condemn a large mass of the community, for lack of skilled assistance, to suffer unrelieved from curable Dental disease ; a consideration outweighing all others in the matter.

The false alarm has been raised in France, as it was in England, that union with the medical profession of a body of Dentists educated on the lines laid down, would tend to degrade the former, but surely, nothing could be more fallacious than the arguments so often used, that the social position of the Dentist, or Doctor, and the estimation in which he is individually held by the public, depend mostly, if not entirely, upon the possession of a full qualification. What do we find in this country in the Medical profession itself? At one end of the scale we see qualified, often highly qualified, practitioners, holding positions little, if at all, above that of the petty tradesman. In every large town are to be found medical men keeping shops—so-called “open surgeries”—in which the proprietor, standing behind the counter, dispenses “advice gratis,” whilst retailing by

the pennyworth cheap drugs and a miscellaneous assortment of "dry goods." At the other end of the line we find physicians, surgeons, and general practitioners, many holding only ordinary qualifications, the associates, trusted friends, and advisers of the highest in the land; and between these extremes we find others occupying every intermediate grade in the social scale. Surely this proves that professional and social position are dependent upon nothing but the personal character, and the real scientific and other attainments of the individual. The fact is that in whatever walk of professional life a man may find himself, there need be but little doubt that if he possess the instincts and culture of a gentleman, he will meet with due recognition without needing to produce any warranty, either in the form of a superior diploma or written voucher of any description, and what is true in this respect of individuals, applies to the profession as a whole. There are parallel grades among medical men in France, and exactly similar remarks apply to the profession in that country. Besides this the Dentist is to be obliged to pass there as he is now here, a preliminary examination in general education, the same as that undergone by the average Medical student, and it is absurd to suggest that the mere attendance upon a few more courses of technical lectures could make any difference in the subsequent moral worth of the practitioner. Hence the objection to the Dental legislation which has been achieved in this country, and which is we trust, to be carried out in France, that it might tend to damage the position of the medical profession, is seen, when examined, to be of little weight, and it has been estimated at its real value by the authorities. We cannot doubt that measures of Dental reform once achieved in France, will be copied generally throughout Europe, much to the advancement of our profession, and to the advantage of the peoples.

Legislative Prospects.

WE understand that the Blue Book, containing the evidence given before the Royal Commission on Medical Acts, will shortly be published, but that, owing to the number of conflicting interests concerned, and the present condition of Parliamentary business, no legislation will be attempted during the present session.

The Dental Diploma Trade.

UNDER this heading our contemporary, the *Medical Press and Circular*, has lately, in a series of leading articles, made very serious charges against the Colleges of Surgeons of Ireland and Edinburgh and the Glasgow "Faculty." "At present," says the *Medical Press*, "the Colleges of Surgeons of Edinburgh and Dublin, and the Faculty of Physicians and Surgeons of Glasgow, are doing a roaring business in Dental Diplomas." As to the Edinburgh College, we find that it has issued thirty-seven Dental diplomas in three years, which can scarcely be called a "roaring business." With regard to the Glasgow Faculty we cannot give the exact figures, but we know they are not very high. In the case of the Dublin College it is different, its diplomas have certainly been dealt out with a most liberal, we may say unsparing, hand. The *Medical Press* alleges that candidates are admitted to examination whose previous history was such as should have for ever excluded them; and that the College has been satisfied with so low a standard of professional knowledge as to allow individuals totally devoid of general or special education to pass the examination with ease.

Mr. John O'Duffy, writing in the same paper, cites the case of a licentiate whose name was recently removed from the Dental Register by the Medical Council. In this instance, a culpable laxity was certainly shown in the selection of candidates—if selection there be.

Allowing for a little exaggeration in language, we must admit that we believe there is some truth in the indictment. It will be seen by our report that the subject has been brought before the Representative Board for discussion, and the Association will certainly do its utmost to prevent further abuses.

We would now make an earnest appeal to the College in question to carefully consider the matter, and in future to take the strictest precautions to prevent the recurrence of the abuses which have been pointed out, and to do this not only for the sake of the respectable dental practitioners who hold its diploma, but also for the sake of its graduates in medicine, whose position must be lowered by even distant association with the class of persons who have taken advantage of its indolence or cupidity.

No candidate should be admitted to examination *sine curriculo* by any of the Corporations, unless he can produce the most unquestionable vouchers for his moral and professional worth. If this be attended to, and a fair standard of examination be also maintained, no one can have much ground for complaint. Anything short of this is clearly a dereliction of public duty which will assuredly bring upon the offending body the unanimous censure of the whole medical and dental professions.

The General Medical Council.

In the exercise of the powers given in section 37 of the Dentists Act, the Executive Committee have determined to register on the mere ground of apprenticeship those persons whose articles bear a date antecedent to January, 1878—in other words, antecedent to the introduction of the Dentists Bill in the House of Commons.

No reasonable fault can be found with this, in a general sense, liberal view of the claims of certain petitioners for registration. But it may be doubted whether the persons who are exempted from the educational demands which are met by the great majority of young men of similar age in the acquisition of the Licentiate-ship, will in after time be grateful for the problematical privilege of registration in an inferior position—a position which will close the doors of the Odontological Society against them, and probably bar their appointment to any public office. We would ask those who propose to accept the grace given by the Executive Committee, to consider how great would be the advantage of a fitting qualification while there is yet time for its acquisition, and how severe and lasting will be the mortification inflicted by inferiority of qualification when linked with equality of age. The Medical Council, with the full knowledge of the purely formal character of many medical apprenticeships, involving neither

services rendered nor instructions received, will—in obedience to the general spirit of the Act—take good care that no young persons are registered under the apprentice clause unless they and their masters have honestly fulfilled the educational conditions required by section 37, and of necessity particularised in the articles of apprenticeship.

Foreign Dental Qualifications.

THE Act requires that the Medical Council shall register such foreign qualifications as “furnish sufficient guarantees of the possession of the requisite knowledge and skill for the efficient practice of dentistry or dental surgery.” What constitutes sufficiency is defined in the curriculum prescribed by the Council, and the admission to registration of foreign qualifications of a lower standard than this would be to deny the validity of their own deliberate judgment. It would, indeed, be tantamount to saying that in England we take four years to duly educate a dentist, but in America you can educate one up to our level in two years. The requisition from the Dental Department of the University of Pennsylvania in favour of the registration of their qualification obtainable in two years, could not, therefore, be granted. Full particulars of the claim and its refusal will be found in the Minutes of the Executive Committee.

Prosecution of Unregistered Persons.

AN application has been made to the Medical Council under section 4 of the Dentists Act, for its assent to the prosecution of certain persons who use the title of dentist, not being registered in the Dentists' Register. The application has been considered and approved by the Executive Committee, and the formal consent to the proceedings was given at the meeting of the Branch Council for England on the 9th inst.

That prosecutions of this nature have not occurred at an earlier date, is mainly due to the active kindness of our Hon. Secretary in warning persons who have taken a false position, and to their consequent timely discontinuance of the illegal practice. After two or three convictions the course of proceedings will be defined,

and the certainty of punishment will, no doubt, reduce to very small proportions cases for its infliction. It is very desirable that the prohibitive sections of the Act should be brought into operation with the least possible amount of friction, and full credit must be given to those who persuade rather than force persons to legal obedience.

In this connection it may be stated that a full reconsideration of the moot question of the alleged incorrect registration of a certain class of persons, will, it is understood—at the request of the Association—take place at the next meeting of the General Council, which usually assembles in the early spring. If the request for the publication of the whole of the legal opinions respecting registration be acceded to, whatever may be the decision of the Council thereon, the action taken by the Association will be more than vindicated, and the confidence of its members in the Representative Board be fully justified.

ASSOCIATION INTELLIGENCE.

Meeting of the Representative Board.

THE Representative Board met on the 4th instant, Thos. Underwood, Esq., Vice-President, in the chair. There were present Messrs. Saunders, Coleman, Vasey, Oakley Coles, C. S. Tomes, Hutchinson, Sewill, Gibbings, T. A. Rogers, Hill, Dr. Walker, Parkinson, Campion (Manchester), Rymer (Croydon), R. Rogers (Cheltenham), J. T. Browne-Mason (Exeter), T. C. Parson (Bristol), Dennant (Brighton), Mahonie (Sheffield), R. White (Norwich), Macleod (Edinburgh) and Turner.

The principal business was as follows:—

The Treasurer reported a cash balance of £87 19s. 7d.

The Secretary reported a large accession of new members from the union of the Western Counties Branch with the Association, and from the profession generally.

A letter was received from Dr. Waite of Liverpool, who was absent through indisposition, calling attention to the necessity of greater discrimination being exercised by the examining boards in the admission of candidates *sine curriculo*, for examination for the dental diploma, and requesting the Representative Board to express

an opinion on the matter, and lay it before the various colleges concerned. Dr. Waite's letter was ordered to be entered on the minutes, and the whole subject passed to the Business Committee, with a view to the collection of definite and responsible evidence of the laxity which, in the opinion of the Board, is prevalent, and future action in the matter.

The date of the annual meeting of the Association was fixed for Friday and Saturday, the 25th and 26th of August next.

The Business Committee was also directed to arrange for the services of a salaried assistant to assist the Treasurer and Secretary in their work.

The following gentlemen were elected members:—Messrs. J. Cooper, J. Lindsay, and W. Forrester, of Edinburgh; A. T. Scott, Ramsgate; T. Truppier, Liverpool; and B. W. Harcourt, Norwich.

ORIGINAL ARTICLE.

Vaso-dentine and Osteo-dentine.

BY C. S. TOMES, M.A., F.R.S.

A VALUABLE paper on the Structure of the Teeth of the Pike has been recently published in the *Archiv für Mikroskopische Anatomie*, Band. 20, by Dr. A. Sternfeld, who has also brought his conclusions prominently before the members of the profession in England by exhibiting his very beautiful specimens before the Odontological Society at the January meeting.

Dr. Sternfeld has investigated the nature of the matrix, and the contents of the canals with greater care than any previous writer, and has added many valuable facts to our knowledge of the tissue. In some respects his descriptions which are more minute, differ from my own, and whilst welcoming him as a fellow worker in a field where there are but few, I gladly accept his corrections on several points, and I also learn to my great regret that in the publication of a paper on the "Hinged Teeth of the Pike," I had overlooked, and so did not acknowledge the priority of, Heincke's

paper; and what is even more unfortunate is that the new edition of my "Dental Anatomy" has gone to press with no reference to this paper.

Whilst I have stated that blood vessels only occur occasionally in the larger channels which course through the dentine of the Pike's tooth, Dr. Sternfeld states that they are invariably or almost invariably present; that this is so, I have myself verified by an inspection of his specimens. He points out that the core of the tooth is divisible into a basal and a crown portion, differing only by the absence of fine tubes in the former. He has also described and figured fibrils in the fine tubes of the dentine, and holds that there is an external layer of enamel of some thickness. This last is a moot question, hardly settled in my opinion by the evidence he adduces, but it is foreign to the subject of my present communication. So far then as facts observed are concerned, I agree with Dr. Sternfeld, and concede most or perhaps all the differences between us; but his inferences from the facts I confess I have read with astonishment.

The main point at issue here is that Dr. Sternfeld contends that the substance of the Pike's tooth, selected by me as the type of osteo-dentine, should not be called osteo-dentine at all, but rather vaso-dentine. I fear that I must have failed to make my meaning clear in my original paper, for had I been anxious to convince a sceptic of the soundness of the grounds on which I based my nomenclature, or had I wanted additional grounds, I could desire none stronger than those set forth in Dr. Sternfeld's paper, which appear more conclusive and more convincing than any I had myself brought forward, always excepting the important matter of development, upon which he has not touched.

Between bone and dentine there is a certain resemblance, not to be forgotten in a discussion of this nature, and the term osteo-dentine, if we concede that it is desirable to classify dentine structures at all, would be most appro-

priately given, to that form of dentine which most closely approaches in structure and development to true bone.

Now let us see what Dr. Sternfeld has to tell us on this head.

Of the large canals he says that the walls are sometimes made up of concentrically striped rings, though no true lamellæ exist, and that, *like the skeleton of the Pike*, the matrix contains no bone corpuscles. Also that we may consider the canals of the basal piece of the tooth (which are continuous with those of the apical part) as Haversian systems, for in good preparations you find cross sections of vessels in them,—p. 389.

In transverse sections of the Pike's tooth the matrix is seen to be divided into polygonal areas, united by a cement substance, and he goes on to say that the tissue of the basal piece has in its ground substance a similarity with osseous tissue which has been formed out of fibrous tissue, and may be considered as typical ossified connective tissue, like the ossified ligament of birds, in which almost the whole ground substance consists of Sharpey's fibres (p. 389). He adds that the structure of the basal piece of the Pike's tooth differs from that of the ossified sinews of the bird in that no bone corpuscles are found in it, and compares the spaces he has seen in the canal to the peri-vascular lymph spaces described by Budge as existing in the Haversian canals of bone.

To this basal portion he applies the term "porous bone of the root piece," and says that no boundary exists between the root piece and the upper portion of the core of the tooth, where there is the same canal system and the same matrix.

Lastly, he tells us that we have in the axis substance of the crown (or upper portion) of the tooth, a tissue which is intermediate between the connective tissue bone of the root piece and true dentine, and finally tells us that the axis substance represents a calcified fibrillar tissue, which is penetrated by a system of Haversian canals, but is wanting in typical bone corpuscles, while it possesses a network of

primitive tubes, which only differ from the primitive tubes of dentine in their arrangement; that it is more like dentine than Tomes knew, and that its richness in vessels, as is wrongly contested by him, warrants the term vaso-dentine,—p. 404.

And yet, in the face of all this evidence, much of it new to me, Dr. Sternfeld contends that it ought not to be called osteo-dentine. I do not feel it to be necessary to add anything in the way of argument in support of my position to the foregoing facts which, culled without exception from his paper, speak for themselves.

But he bases his proposition to adopt the name vaso-dentine for this particular tissue, mainly on two grounds; the one that each large canal contains vessels, the other that there are fine tubes in the axis substance comparable to dentinal tubes. To this it need only be answered that the Haversian canals of bone contain blood vessels, and that the canaliculi are in many forms of bone greatly developed.

Moreover, the distinction of dentines into vaso-dentine and osteo-dentine would probably not have been advanced by me but for the strongly marked difference in their development, upon which Dr. Sternfeld does not touch at all.

HOSPITAL REPORTS AND CASES IN PRACTICE.

Spontaneous Disorganization of the Pulp.

WE have received a communication from Mr. Evans, of Tenby, to whom we have been previously indebted for interesting clinical notes, containing a short account of a case which exhibits some phenomena which we think entitle it to special notice. A patient came under Mr. Evans' notice with an upper right lateral incisor of a dark bluish brown colour, the adjacent mucous membrane being pale grey in colour, but otherwise normal. This condition, the patient affirmed, had existed for three years; there was no looseness and no decay, and no history of antecedent inflammation. Mr. Evans naturally opened the pulp chamber from the

lingual surface and thereby liberated a drop or two of "dark brown matter of the consistency of cream, and having but little odour." We regret that Mr. Evans has not told us the nature of the slight odour that there was, and also what was the appearance presented by the matter under a high power. If the patient's story be correct this fluid must have occupied the pulp chamber for three years without giving rise to an alveolar abscess; this, of itself, is extraordinary enough. The colour of that fluid was obviously due to the escaped and altered colouring matter of the blood. It would be interesting to know whether there were any purpuric spots elsewhere, or whether the patient was hæmorrhagic, and the collection in the cavity simply the result of a small clot interrupting the blood current. We should further like to know what the result of treatment has been. Lastly, should Mr. Evans be compelled by future complications to extract the offending member; we should like to hear whether after all there were no traces of old periostitis about the root.

We have been assured by Mr. C. S. Tomes that he on one occasion drilled into the pulp chamber of a tooth which, as far as its external surface was concerned, was to the naked eye absolutely healthy. There was no spot of caries whatever, but on the drill reaching the chamber a fairish amount of exceedingly offensive matter escaped. Mr. Tomes unluckily had not an opportunity of examining this matter, but the smell proves the presence of germs. It was of course possible that the germs had reached the pulp cavity from the outside; it is highly probable that there is a continuous network of protoplasm connecting the periosteum with the odontoblast layer. The lacunæ of the cementum contain living matter, and so do the anastomosing canaliculi; these in turn on the dentinal surface most likely communicate with the fibrils. Such channels would be amply sufficient for the passage of organisms which might account for changes in the pulp of an apparently sound tooth which are otherwise inexplicable.

Singular Accident with Nitrous Oxide Gas.

By F. GRAHAM YOUNG, L.D.S.I., Bristol.

ABOUT a week ago, when preparing to administer Nitrous Oxide Gas (with the assistance of my partner) to a patient, I met with the following rather unusual accident. I was holding a 100 gallon bottle of the gas, between my knees, and had turned on the tap,

when the intense cold produced by the gas rushing from the bottle into the bag, caused the tube which connects the two to break off just like a piece of sealing-wax. To save the loss of gas, I thoughtlessly held the two divided portions of tubing together. I held on for about 8 or 10 seconds, when I found the cold so intense, and the pain so great, that I was compelled to relinquish my hold. When I examined my hand, which unfortunately was the right one, I was astonished to find it covered with at least a dozen large blisters, from which I suffered great pain, and shortly after, the constitutional effects produced considerable nausea and faintness, which did not pass off for some time. I have had considerable pain since, and only to-day, six days after the accident, have been able to use my hand with anything like freedom from pain.

I should like to know if any of your readers have had at any time a similar experience. I treated the injured surface the same as for a burn or scald; vaseline I found by far the best application.

Intense cold, it would seem, produces the same effects as great heat, I should think the temperature of the gas when issuing from the nozzle of the bottle must be 20° or 30° below zero. I shall not forget the lesson, and shall remember the proverb, "Once bit twice shy."

REVIEW.

The Origin and Formation of the Dental Follicle; the first part of a Memoir on the Development of the Teeth. By Drs. CHAS. LEGROS and E. MAGITÔT.

(Continued from page 558).

THE two maxillary arches being formed, it is soon observed that in the rounded part (which will afterward constitute the alveolar border) there is produced a bed of epithelial cells forming a protuberance or smooth ridge (*saillie ou bourrelet*), and without any fold or depression whatever. This ridge, visible to the naked eye, is still more manifest in a section cut perpendicular with the axis of the maxillary arch, and is composed of a thick bed of cells. On its sides an epithelial coat is formed of only a few rows (*rangées*) of these cells superposed upon each other, and even of a single row. Beneath this external ridge a projection sinks into the subjacent elements, the outlines of which represent nearly the form of the letter V, with the apex slightly inclined toward the inner side.

Thus constituted, the *bourrelet* forms, in reality, a continuous epithelial band, nearly vertical, the whole length of the alveolar border. It always exists in the embryos of man and the higher mammalia, and is even found on some parts which will remain devoid of teeth, as in the bar of the solipeds. The form of this epithelial band is the same in the different species of animals; and while it presents its broadest aspect on the alveolar ridge, it grows thinner, and at the same time bends a little inward, as it descends into the subjacent tissues: so that its internal or lingual face presents a concavity, and its labial or buccal face a convexity.

This band is composed of the same histological elements that constitute the epithelial coat of the oral mucous membrane,—that is to say, of nucleated cells, rendered polyhedral in form by reciprocal pressure; and that portion which penetrates the tissues of the jaw is bounded by a continuous layer of prismatic cells. The cells that compose the centre of the band often present at their borders that denticulated arrangement which has been noticed by authors in the cells of the epidermis, and by which the elements interlock with each other.

As regards the prismatic layer it does not differ from the *stratum Malpighii*, from which it is directly derived.

From the preceding considerations it is seen that the epithelial band, just described, is simply a prolongation of the epithelial tegumentary layer of the mouth, which, in sinking into the embryonic tissues of the jaws, forms for itself, so to speak, a groove which it exactly fills.

As soon as the development of the epithelial band is completed, a thin process shoots out from its internal face, which we shall designate the *epithelial lamina*. This lamina is a continuous process, extending the whole length of the epithelial band, from which it emanates about midway between its apex and the epithelial layer (sometimes a little nearer the latter), and appears to be a kind of diverticulum (or inflection) of the band itself. It is somewhat flattened from above downward and its rounded extremity is slightly bent in the form of a crosier. The elements of the lamina are of the same character as those which compose the band, viz., polygonal cells inclosed by a continuous layer of prismatic cells. As development advances, large polygonal cells make their appearance in the thicker portion of the lamina, similar to those found in the band, or external epithelium.

The *enamel-organs*, the first trace of the dental follicle—origi-

nate from points upon the free extremity of this lamina. They show themselves, at first, as slight tubercles arranged at intervals along the margin of the lamina, and corresponding, in number and situation, to the teeth that will be developed in the first dentition. To these protuberances we give the name of *primitive bourgeon* of the follicle (the first follicular budding, or bud).

This bourgeon retains its connection with the lamina, from which it is a direct derivation, by means of a slender cord or neck which gradually lengthens as the terminal mass increases in dimensions. During the whole course of development this bourgeon constitutes the enamel-organ : while the neck in its progressive lengthening, only serves as a temporary bond uniting it to the lamina. At its first appearance the primitive bourgeon presents a nearly spherical form and is composed of an external layer of prismatic cells, (a continuation of those of the lamina), inclosing a mass of polygonal cells ; the latter being always less in diameter than those contained in the lamina.

During the progress of evolution these elements (inclosed in the prismatic investment) undergo a modification whereby they are transformed into stellate bodies—a phenomenon that never occurs in the cells of the cord or of the lamina. The disparity in the size of these cells, together with the morphological changes they experience, seems sufficient to establish, from this period, a very clear distinction between the constitution of the *lamina* and that of the *bourgeon* which emanates from it. The more recent authors that have written upon this subject have confounded these two parts with each other.

These differences, however, will be more clearly manifest during the progress of evolution, when the elements of the bourgeon (enamel-organ) undergo a series of important changes ; whereas those of the lamina invariably retain their original appearance.

In continuing its evolution, the primitive bourgeon, which was at first spherical, becomes somewhat cylindrical, though it still pursues a horizontal course, until it has become noticeably lengthened, when, by an abrupt inflection, it takes a vertical direction, and sinks into the depth of the jaw. Thus extending its course, the cord acquires a length which varies according to the species of animal, besides undergoing certain secondary inflections. In man, as also in the dog, the cord always remains short, and in the *solipeds* it is still shorter. In the calf and in the lamb—animals that

on all parts of the periphery ; but the moment the enamel-organ assumes a new form, produced by the development of the bulb, this stratum undergoes some important modifications. At this period, in fact, the cells of that portion of the cortical layer, which occupy the *concave* face of the enamel-organ, and which consequently lie in contact with the dentinal bulbs, begin to increase in length ; while those constituting the *convex* surface of this organ sensibly diminish in size. This difference in the dimensions of the cells occupying the two segments of the *prismatic stratum* or cortical layer manifests itself more and more during the progress of follicular evolution ; and the external layer ("external epithelium of the enamel organ ") disappears long before the complete atrophy of the enamel-pulp ; while the other (the "internal epithelium ") still remains to perform the important functions assigned to it, namely, *the formation of the enamel*.

The prismatic cells of the concave face of the enamel-organ (the enamel-cells, or ameloblasts) offer some peculiar characteristics. Originally identical with those of the (lowest layer of the) Malpighian stratum from which they are directly derived, these cells, besides increasing in length, experience some important changes in form. The extremity that is directed toward the centre of the organ becomes long and slender, forming processes which unite with, or are continuous with, the filaments that proceed from those neighbouring cells which constitute the portion of the enamel organ known as the *stratum intermedium*. The opposite or peripheral extremity, that is to say, the *base* of these cells, presents the regular prismatic form of a hexagon. If an underranged layer of these prismatic cells, or ameloblasts, magnified about 400 diameters, be examined, it is found that the free margin of this layer (that is to say, the part that corresponds to the base of these cells) appears clearer than the bodies of the cells themselves, and in fresh preparations seems like a *continuous line*. If, however, a like examination be made of some hardened preparations, or if careful means be taken to detach this marginal line, which the edge of a section of the plateau represents, from the base of the cells, it will be found that it can be subdivided into as many sections as there are cells in the layer.

The enamel-organ soon loses its spherical form, and acquires the appearance of a hood or cap ; and this change in form is contemporaneous with the appearance of a new component part of the follicle—the *dentinal bulb*. A slight opacity appears on the point

of embryonic tissue of the jaw that corresponds to the depression in the enamel-organ. This opacity is due to the production of new elements, which are grouped in such a manner as to form at first a little rounded nipple of hemispheric form, the convexity of which corresponds exactly to the depression or concavity of the enamel-organ. This little papilla, which represents the incipient dental bulb, is composed at first only of nucleated embryoplastic elements, and soon afterwards of fusiform and stellate bodies. At this early stage of development a vascular loop enters its substance, similar to those found in the papillæ of the skin; but there are not discovered in it any nerve-fibres until it has attained a mammillated form. The bulb retains this latter form but a brief period, for it soon shows a tendency to take that of a future tooth; thus, for the incisors and canines, it assumes a conical form; for the molars, in man and the carnivora, the primitive papilla is soon covered with secondary protuberances, equal in number to the cusps of the future crown; and in the compound molars of the herbivora and rodents it throws out prolongations which represent also the future divisions of the crown.

In all these circumstances the enamel-organ allows itself, as it were, to be moulded by the bulb, so as to exactly conform to whatever configuration the latter may assume.

As the dental bulb develops in height, it takes a slightly oblique direction in relation to the axis of the follicle, and at the same time undergoes a certain constriction at its base, thus forming a kind of neck at the line where (as has been already seen) the enamel-organ is reflected back upon itself.

There is, however, one peculiarity in the structure of the bulb which ought particularly to be noticed here, and that is the nature of the external surface of this organ.

If the structure of a vertical section of the bulb be examined, it is found that there exists at the periphery of this, organ a thin, clear zone, which is easily distinguished from the subjacent tissue by its refraction. This zone, to which several anatomists have assigned important functions, is only a thin stratum of amorphous material elements, and of granulations. This amorphous layer is not only more transparent, but somewhat denser, than the subjacent tissue of the bulb, so that sometimes it may be detached from the surface of the latter. This fact has led many anatomists to suppose that the bulb was invested with a distinct membrane

(the *membrana præformativa* of Kaschkow). It is in this tissue that ivory-cells ("odontoblasts") make their first appearance.

As soon as the little mass of new elements, which constitutes the dental bulb, has taken a hemispherical form, two opaque processes, originating at its base, ascend divergently upon its side; these appear to emanate directly from the tissues of the bulb itself, and they represent the first trace of the sac of the future follicle. If at this period the constitution of these follicular processes be studied, they are found to be composed of exactly the same elements as the bulb from which they originate. As the bulb continues to develop, these processes also increase in length, and bend round towards each other in such a way as to finally embrace in their double concavity not only the bulb itself, but also the enamel-organ. In this manner the follicular wall, (which was at first only a little collar attached to the neck of the bulb), by its gradual upward growth finally embraces and isolates both the enamel-organ and the dentinal bulb.

At this period the follicular wall may be compared to a muff inflated in the middle, the lower opening of which corresponds to the base, or neck, of the bulb to which it is attached; while the opposite opening corresponds to the neck of the enamel-organ, that is to say, to the point where the latter is connected with the epithelial cord. Soon afterwards the cord becomes severed at this point by the resorption of its constituent elements; a cessation of continuity due, without doubt, to the compression or strangulation it undergoes from the encroaching walls, which now unite at this point, and completely inclose the follicle. Thus the enamel-organ loses the connection which it had hitherto maintained with the epithelial lamina, and the dental follicle may be regarded as definitely completed.

The sac is composed primarily of embryoplastic elements, and gradually assumes the aspect of a distinct laminated membrane, which may be separated from the adjacent tissues, except at the base of the bulb, to which it remains fixed.

At this period of evolution the follicle is completed and closed, and is composed, proceeding from the outside inward, as follows:—

1. Of the *follicular wall* which clothes its entire surface, except the base of the bulb, which remains free.
2. Of the *enamel-organ*, subjacent to the follicular wall, to which it conforms in its whole extent, in such a way that, while its ex-

ternal face corresponds to this wall, its lower concave face is in immediate contact with the bulb.

3. Lastly, of the *bulb* itself, which occupies the lower and central portion of the follicular sac.

Except the three fundamental parts just named, no other substance finds place in the constitution of the follicle. The enamel-organ exactly fills all the space comprehended between the sac and the bulb, and terminates at the base of the latter in a rounded margin, which forms the dividing line between the prismatic cells that cover both its concave and convex surfaces. This boundary, however, is not artificial. It results, on the one hand, from the anatomical differences that these parts now present, and, on the other hand, from the physiological *role* which the cells of the concave face are called upon to perform; whereas the external layer atrophies rapidly, and disappears. This prismatic layer of the concave surface (adamantine membrane), constituting the stratum of enamel-cells (ameloblasts), remains a long time in the composition of the follicle, not only after the external layer has disappeared, but even after the atrophy of the gelatinous part of the enamel-organ. In the rodents (whose incisors, as we know, are of continuous growth), this layer of cells (ameloblasts) remains upon a portion of the anterior or convex face of these teeth during the entire life of the animal.

(To be concluded).

REPORTS OF SOCIETIES.

Odontological Society of Great Britain.

THE usual Monthly Meeting took place on the 6th inst., at 40 Leicester Square, S. Lee Rymer, Esq., President, in the chair.

Mr. HENRY SEWILL showed a cast of the mouth of a child nine years of age showing a supernumerary lateral incisor so like the true lateral as to render it impossible to distinguish which was the proper tooth to extract. He proposed to wait until the canine appeared, and then act as circumstances might require.

He then showed an upper lateral incisor and a lower bicuspid, from the apical foramen of each of which a piece of barbed root-extractor projected. In these cases acute periostitis had been set up by the foreign body, and the patients had come to him for relief. The same accident had, however, happened in his own

practice ; he had generally succeeded in recovering the broken fragment by passing up a broach with a little cotton wool twisted round the end ; but in one case, in which this device failed, he at once extracted the tooth. Mr. Sewill also called attention to a communication lately made by M. Magitôt to the French *Académie de Médecine*, in which he asserted that alveolar periostitis was so generally met with in diabetic patients as to be of considerable assistance in forming a diagnosis of the latter disease. He (Mr. Sewill) had met with two cases which seemed to bear out the correctness of this observation, and he should be glad to hear if the experience of others had been similar.

He also mentioned the case of a young gentleman who lately came to him to have a small cavity filled in an upper molar. Whilst Mr. Sewill was preparing the cavity, the patient had a distinct, though short, epileptic attack, followed after a brief interval by a second. After this the operation was completed without further interruption. On enquiry it appeared that the patient had had epileptic attacks some years previously, but had apparently ceased to be liable to them.

Mr. COLEMAN said he had had several cases of epileptic fits after extractions without gas, but none where gas had been used. He also mentioned a case which had occurred in the practice of Mr. Lyons, in which the patient had a fit each time an exposed tooth pulp was touched. The pulp was touched three times, and a fit occurred every time.

Mr. J. S. TURNER said he had occasionally had the misfortune to leave part of a nerve-extractor in a tooth, but he had not yet met with any bad results from the accident, and did not see that these need necessarily follow. He thought the association of alveolar periostitis with diabetes must be merely a coincidence. He had certainly seen cases of advanced diabetes in which the gums were quite sound ; and similarly he had seen cases of alveolar periostitis in which there was no diabetes.

Mr. MOON said he could not agree with Mr. Turner as to the harmlessness of leaving the point of a nerve-extractor in a tooth. In such cases, if he failed to remove the barb, he always thought it right to acquaint the patient with what had occurred, and advised extraction of the tooth.

Mr. GADDES remarked that some three or four years ago he broke off the point of a nerve-extractor in a lateral incisor, and

failed in his attempts to extract it. He then pumped in some thin osteo, and subsequently filled the tooth without any bad results.

Mr. SEWILL replied that leaving a small piece of steel in a root canal, if the nerve had been previously destroyed, could not cause any harm; but in the cases he had brought forward, the barb had protruded beyond the apical foramen into the alveolus, and had thus set up intense irritation.

Dr. CAMPBELL then exhibited his "New Mode Vulcaniser," and gave a description of its distinctive features.

The PRESIDENT then delivered his inaugural address, of which the following is an abstract:—

After thanking the Society for the honour it had conferred upon him by electing him to his present distinguished position, Mr. Rymer referred to the alteration in the byelaws, which enables the Society occasionally to choose a president from amongst the provincial members, and of which he had been the first to reap the advantage. In the earlier years of the Society's existence, it would have been exceedingly inconvenient for the president of the day to have been non-resident. He (Mr. Rymer) had a vivid recollection of the years of anxious toil which preceded the settlement of the questions then in suspense, and knew that the work necessitated such frequent meetings and important consultations as to render it imperative that the President should always be at hand ready for any emergency. But now that the Odontological Society was, happily, no longer troubled with any political controversy, with meetings held at stated, convenient and not too frequent intervals, and with the travelling facilities of the present day, country members, many of whom were in every way well qualified for the office, might occupy the presidential chair with but little inconvenience to themselves, and none to the Society.

The events of the past which bore upon the present improved status of the Dental profession had already been described from that Chair with such graphic and impartial accuracy as to render it unnecessary for him to take up time with any lengthened allusion to the Reform Movement of 1856, or to the history of the subsequent proceedings. But there was one important event which he thought might be rendered clearer by a slight explanation, viz., the amalgamation of the Odontological Society with the College of Dentists. The announcement of the fact that the College of Surgeons, after long deliberations, had come to the conclusion that it would tend to the public advantage to grant

diplomas in Dental Surgery, and the publication of the code of regulations, was naturally hailed with gratification by the Odontological Society, whilst to the College of Dentists it came rather as a surprise, since it had been thought that too strong a feeling existed in the medical profession to allow of the institution of examinations and the issue of diplomas in a speciality of any kind, either by the College of Surgeons or by any other body. The duty of those who had the direction of the affairs of the College of Dentists at once became clear. To have allowed the continued existence of the College on an independent basis after the battle had been thus fairly fought out, would have been unwarrantable under the circumstances. Instead of helping on a good cause, it could only have carried on an embarrassing opposition and postponed indefinitely the attainment of fraternal concord. The executive, therefore, understanding the importance of the crisis, placed themselves in communication with the Council of the Odontological Society with the object of arranging an amalgamation. This was consummated with entire cordiality and good feeling on both sides, and he had no hesitation in saying it had never for a moment been regretted.

Had the profession continued to be racked with wide-spread dissensions, the Dentists Act of 1878 would not have been secured. As it was, the opposition to the measure arising from a small section of men with impracticable views was futile and, together with far weightier obstacles was, under splendid generalship, successfully overcome. This was unquestionably the most important event which had happened during the twenty years which had elapsed since the amalgamation. Its healthy action had already become apparent, but it would require some time before all its latent powers for good could be fully developed; its elevating influence would increase with each succeeding year.

To utilize the Act to the utmost that invaluable organisation, the British Dental Association, had been established on a sound basis, prepared to deal with almost any question affecting the interests of the profession. Every thoughtful practitioner would do well to strengthen the Association by becoming a member, and he hoped that its already influential constituency would be materially augmented before the time came for holding the anniversary meeting in Liverpool.

Mr. RYMER then went on to speak of the changes which had taken place in the granting of diplomas in Scotland and Ireland,

the development of Dental hospitals and schools, the growth of Dental literature, the progress of Dental journalism and the flourishing condition, not only of the Odontological Society itself, but also of the provincial societies subsequently established on the same lines. Having thus glanced at the history and present condition of the more prominent institutions of the profession, he passed on to speak of the future, both as regards the work of the Society and of the profession at large. The work of the former showed no signs of exhaustion; there was, in fact, no boundary to the field of scientific investigation. Facts brought out in one enquiry would often suggest a variety of new ideas, each in itself capable of further development.

So also with regard to the profession at large. The great work of the present age had been our steady progress in practical hygiene, by which human life was being gradually but surely elongated, and the profession could aid this by ascertaining more clearly the conditions which would favour longevity in the dental structures. Distinguished authorities asserted that there was no valid reason why men should not live comfortably for a hundred years, and the census returns showed that a certain number did now reach that patriarchal age. Why was it otherwise with the vast majority? A satisfactory answer to this question would probably assist us in learning a great deal more than we at present know about local lesions.

In conclusion, Mr. Rymer remarked that in fulfilling the duties of his office he felt sure that he might rely on the kind support of the members. "Following immediately the presidency of a brilliant and exceptionally successful year, I am conscious of the disadvantages under which I labour, but, with your kindly and sustaining influence I may nevertheless be enabled to follow the admirable example of my predecessor to an extent sufficient to maintain the dignity of the Society."

The PRESIDENT then announced that at the next meeting (on March 6th) a paper would be read by Mr. Charters White. The Society then adjourned.

Odonto-Chirurgical Society.

At the usual monthly meeting of this Society, which took place on the 12th ult., Dr. John Smith, F.R.C.S. Ed., President, in the chair, the paper on "Vulcanite Dentures," read by Mr. Austin Biggs at the preceding meeting, was discussed.

Mr. MACLEOD said :—There are one or two statements in Mr. Biggs' paper which can hardly pass without remark. In the opening, Mr. Biggs said that plaster for dental purposes was not improved by the addition of any chemical substance. I think that is too general and sweeping a statement. It holds good so far as sodium salts and other efflorescents are concerned ; but I find the addition of potash alum more rapidly sets the plaster, and thus prevents that large amount of irregular expansion which generally occurs when the plaster is simply mixed with plain water, and the effects of which are more frequently felt than acknowledged. I find also that the plaster mixed with potash alum is quite as strong after being steamed as plaster mixed with water alone. With regard to flasks, Mr. Biggs queried, "Of what use is the lid of a three-part flask?" The lid, I think, is a useful and necessary appendage. It enables you to pour plaster on and around your case in small quantities, and so the better ensure the absence of air blows : and a second and important use is that by removing the lid you can cut down to the under half of the flask, remove the upper, and clear your work of the plaster encasement, without subjecting the delicate porcelain parts thereof to the strain of twisting which accompanies the separation of the two halves. These, I think, are advantages sufficient to recommend its continuance, and there is no disadvantage connected with its use which can possibly cause one to cavil at it. As to imbedding the wax duplicate, as described by Mr. Biggs, in lieu of steaming upon the original plaster model, I do not think that it is a method which will meet with the general approbation of the members of this Society. The great object is to get as correct a duplicate as possible of the mouth, undercuts and interstices included, as on the adaptation of the plate to these we depend very much for the retention of the artificial denture. Mr. Biggs admitted that by his method the plate did not fit so accurately to the interstices in partial cases, but said that it went easier into the mouth. No doubt, it did get easier into the mouth, but it would get out of it easier too ; and that would make one very dubious as to the doing away with the vulcanising upon the original plaster model. Another portion was original on Mr. Biggs' part, namely, the dicing by means of netting on the palatine surface of the denture. I cannot say that I agree with Mr. Biggs in considering it either useful or ornamental. Then he spoke of the advantage of scraping the buccal and labial

surface of the model, and also across the posterior palatine portion, so as to secure a more close adaptation of the piece. That I consider quite unnecessary if the original model is used, but it might be somewhat necessary if they used Mr. Biggs' method of the duplicate wax, and imbedded it in the manner described by him. But even then, it could only be occasionally used with success, because they could not possibly scrape the buccal surface of the model without causing a tightness and pressure, and unless they scraped it upon a portion of the buccal surface which lay at right angles with the alveolar border, and was opposed by a parallel or an undercut surface, it would only lead to displacement.

Mr. MACKINTOSH :—Although agreeing to a great extent with Mr. Biggs' methods of working vulcanite dentures, I differ from him on one or two points. First, as to flasks, I prefer gun metal, as it resists the action of the sulphur, and although not stronger than the malleable iron, it lasts much longer, provided it be of the same weight of metal, those flasks got at the Dental Dépôt being much too slight. The lid gives facility in cutting out the case when vulcanized, but is a source of weakness to the flask. The union of a model with the investing plaster in the flask is, I think, quite strong enough for all practical purposes, provided the model be well soaked and inserted with its base resting on the bottom of the flask, and the plaster be thoroughly set before proceeding to pack and vulcanize. I see no objection to Mr. Biggs' method in using his wax base plate as his model, if it can be made not only to fit the model exactly, but can be taken off the model without disturbing the fit; for sometimes we find a model of the upper jaw which is underhung both on the buccal and lingual side, and where it would be very difficult to take off the base plate without disturbing the fit. For some years I have been painting the models with a solution of silicate of soda, and have found it of great advantage in strengthening the models, and in giving a smooth surface to the vulcanite, which parts from the plaster without any brushing. I also cover the outer surface of the base plate with strong tinfoil, which is a very great saving of time, as the plate requires very little polishing after leaving the vulcaniser.

Mr. WILSON :—I quite agree with Mr. Biggs that the mode of heating, as also the temperature to which the rubber is exposed in vulcanising, is really a point of some importance. The slower

the temperature is raised to the requisite point, the better for the rubber; but as regards the length of time that degree of temperature should be kept up, it seems to make little or no difference whether it is $1\frac{1}{4}$ or 10 hours. The tendency is undoubtedly to rush up the heat too quickly. I consider the thermometer, as usually inserted, to be simply useless as a guide to the temperature of the interior of the boiler. The steam pressure gauge seems the only reliable one. As regards the flask, I may say I have never used a three part flask, and I think that in the method I follow, Mr. Biggs will find a slight improvement on that described in the paper. Instead of depending on an overlapping edge of plaster (necessarily thick) to retain the teeth *in situ* under pressure, I use a curved brass plate, which has its upper edge bent at right angles so as to form a ledge, more or less broad, as the case requires, so as to overlap the edges of the teeth, while the lower edge is bent irregularly, so as to offer great resistance to displacement when imbedded. A very thin layer of plaster is needed between the plate and the teeth, so that the parts are much better exposed for packing. Then, as regards the model to vulcanise on, I have, as to its preparation, to differ *in toto* from Mr. Macleod, as, while he looks on potash alum as almost invaluable when you want plaster to set rapidly, I consider its presence as a disadvantage when the model has to stand pressure *when moist*. So long only as the model is kept perfectly dry, does it add to its hardness. As to Mr. Biggs' mode of dispensing with a duplicate model, and flasking the wax direct, it certainly saves time, and the case may fit as well as those on metal plates do; but you certainly will not get the fit you would obtain from a duplicate of the original plaster impression. As to scraping the buccal and the extreme palatine margins, I think that with a plaster impression it would do harm in place of good, these being just the parts I find to hurt, if there is tightness at all. Lastly, as regards the want of taste in setting the teeth, I think gum blocks the most thoroughly mechanical; you cease to have control over your work, and are bound down to the particular style of the blocks. If a breakage occurs, it means the whole block, and I can easily conceive of circumstances where it may involve a new set. As regards artistic effect, I think nothing gives the operator a better chance than when he has the separate teeth to place in any position relatively to each other that he pleases.

Mr. CAMPBELL:—I have just one word to say regarding the

cutting and carving of models. I think that a model made from a correct plaster impression could not but be harmed by cutting and carving, especially the buccal and palatine surface of the models. Mr. Biggs contrasted the use of celluloid with vulcanite. So far as my experience goes, I cannot say that celluloid is very useful, except for lining the gums front of a vulcanite case, and here it is unsurpassable.

Mr. FINLAYSON :—I agree generally with what has been said regarding the paper of Mr. Biggs. In the use of potash alum I have had considerable experience since the subject was brought under our notice as a Society, and I do not think that the stucco models made with it in combination have ever, in any case, been found to get crushed in the flask or in packing—and the admixture is employed throughout the whole process. The solution employed is of the strength of half an oz. to the gallon of water. Mr. Biggs says he is indebted to Dr. Best of London for the idea of trimming the model ; I would rather style it mutilating it, and that indicates fully my opinion regarding the system of scraping a good plaster model. It should not be needed. Gum blocks I am not in favour of, having made a good many cases with them. Continuous gum teeth, minus the gum, produce a neat, natural, case, and can be made as irregular as can be desired. They require wide bites, however.

Mr. CORMACK :—When in Glasgow some time ago, Mr. Biggs kindly invited a number of his patients who wore complete upper sets of gum blocks, to see me. I may have been fortunate in the faces or in the gums, but these cases which I saw, in regard to artistic appearance, were everything that could be desired. I was delighted with them in regard to the fit, which was perfect, and I have never yet seen any upper cases adhere to the palate with greater tenacity.

Mr. BIGGS :—I have to thank the gentlemen present for their very courteous criticism of the paper. I am sure that it has been an honest criticism, which is a great matter. I asked fair criticism and desired no favour ; I have just got that. As regards what Mr. Macleod said in connection with the plaster of Paris, there is no person who is more willing to record his deep gratitude to Mr. Macleod than myself, for the great comfort it has been to know of the mixture of the potash alum in taking impressions. It has been one of the greatest boons to me since I have known it ; I

have had great difficulty many a time in taking them as perfect as I can now do, since Mr. Macleod has introduced to the Society's notice the mixture of plaster with potash alum. I beg, however, to differ from Mr. Macleod in the matter of the plaster of Paris being deteriorated by the mixture of any material whatever, when the flask is to be introduced into the vulcanizer. Mr. Macleod seems to think that I am wrong in the use of the flask without the lid; I beg to differ, because wherever there is a flask with a lid, I am certain everyone must have occasionally found that the lid was a source of annoyance in more ways than one. Perfection in the flask is a very great matter, and the flask I showed, that had but the two halves, was made in such a way that, on striking the edge with a hammer, the case and surrounding investment would jump out. Then, in regard to suction, Mr. Macleod seemed to think that either the model must be inaccurate, or the fitting be deteriorated by modelling of the wax plate, and that it must of necessity require this scraping of the model to make it at all a close fit. I again differ from Mr. Macleod; I think I can take a plaster cast than which I do not think any member could succeed in getting better. These casts, notwithstanding their accuracy, I would have no hesitation in carving and cutting in the way I spoke of. The difficulty that has arisen in some of the members' minds has been caused by the fact that I have not been able to carry them along with me to the full extent that I had meant. These things are very apt to be misleading when not properly carried out, and a person not having seen the thing personally done, could not carry the purpose properly with him. In regard to the netting, I still hold it to be a very good thing. The netting on the surface of the model brought the cast away much cleaner from the model, and it was no detriment whatever. I have been, as you are aware, twenty-two years in the dental profession, and I do not give up the old way of working unless I have some really good reasons for it. I have given them up and come to this, and I think that it has been the most successful I have ever wrought out.

A vote of thanks having been awarded to Mr. Biggs for his paper,

Mr. MACLEOD exhibited an artificial denture with velum attached, and showed a more simple way of making moulds for similar cases. The method was extremely simple, an improvement upon Dr. Norman Kingsley's and Mr. Smith Turner's, and was the

idea of his assistant, Mr. Durward. It consisted of three pieces, an under flat piece, a central, or heel piece, and an upper flat piece, and produced a velum which was free from any transverse ridge, or rough edge, which would require trimming before being put into the mouth.

Mr. E. A. CORMACK exhibited:—1. An Exfoliation from Right Lower Jaw of a little girl, aet. $3\frac{1}{2}$ years, a sequel to measles. It consisted of the posterior half of the alveolus of second temporary molar, and the alveolus of the first permanent molar holding the tooth in situation. 2. An accumulation of tartar on a lower denture of two teeth which had been in the mouth for nine years.

Mr. WILSON exhibited a permanent upper canine, in which the enamel extended nearly half way up the root, on both lingual and labial surfaces.

Mr. BIGGS showed a new Coffor Dam Appliance. It was designed to act as Gag, Lip Distender, Tongue Holder, and Coffor Dam, all in one, with the advantage of being applicable in a second, and leaving the entire lower set of teeth free to be operated upon individually or collectively.

He also demonstrated a means of building up teeth having their cervical edge decayed down to or below the gum surface, to their original contour, by a very simple and easily applied matrix, that is by a piece of white iron, commonly called tin, rolled out thinly and cut to about two inches long for the molars and about three-eighths broad, for bicuspid about three-quarters long and depth to suit length of crown. This is pushed between the adjoining teeth, and then bent by the fingers to the shape of the tooth to be built up, and may be secured by overlapping its extremities, or by a strong clamp. Where the tooth is isolated, a small strip of india-rubber can be stretched from one extremity to the other, which, when the tin is bent, will form a complete dam and matrix combined.

The CHAIRMAN then intimated that the next meeting would take place on Thursday, the 9th February, when a paper by Mr Laws, of Weymouth, "On Surgery Talk; or, Conversations between Dentist and Patient," would be read.

Appointment.

WILLIAM HERN, L.D.S.ENG., has been appointed House Surgeon, and Walter Harrison, Assistant House Surgeon, to the Dental Hospital of London, Leicester Square.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Paul Bert on Anæsthetics.

IN an important paper relating to the use of anæsthetics communicated to the Paris Academy of Sciences by M. Paul Bert, experiments are described in which dogs, mice, and sparrows were kept in chambers containing air along with various proportions of some anæsthetic. In a graduated series of such mixtures of increasing strength one is found just sufficient to cause insensibility, and proceeding higher a dose is reached which kills. The interval between these points (the anæsthetic dose and the fatal dose) M. Bert calls the working zone (*zone maniable*). He has sought to determine it for various agents—chloroform, ether, amylene, bromide of ethyl, chloride of ethyl—for the animals named, and has reached the singular result that in all these cases the fatal dose is precisely double the anæsthetic dose. Thus, in the case of mice, submitted to chloroform, 6 grammes of chloroform vapour in 100 litres of air cause insensibility, and 12 grammes are fatal. When an animal is made to breathe, in the way indicated, a mixture about the middle of the working zone, it is very quickly anæsthetised and remains perfectly quiet during the whole experiment (two hours in some cases), not requiring any attention or concern; and the contrast in this respect to the ordinary methods by compress, sponge, etc., is striking. In the latter case, indeed (M. Bert points out), a patient alternately breathes, according to the quantity of chloroform in the compress, or its distance from mouth and nose, a mixture of air and chloroform either below the active dose, or within the working zone, or at or beyond the limit of safety; and a fatal result in the last instance is not always warded off by prompt removal of the compress. The working zone is often very narrow; in the case of chloroform, while 8 grammes in 100 litres does not suffice to render a dog insensible, 20 grammes kills it. Ether is much less dangerous, for between the active and the fatal doses of it there is an interval of 40 grammes. An anæsthetic acts, not by the quantity respired, but according to its proportion in the inspired air; hence, the statements of surgeons as to how much chloroform they put on the compress have little value. M. Bert recommends the use of a mask, communicating by a tube with a zinc reservoir holding 200 or 300 litres of the anæsthetic mixture. The pulse and the respiration need no attention. The most delicate matter

would be the determination of the lower limiting dose. The author's experiments here give no guidance. The doses varied greatly for dog, mouse, and sparrow, always less for the mouse than for the dog. They were always greater for the sparrow than for the mouse; and in the case of chloroform and amylene they were about equal for the sparrow and the dog. Among other facts, it is stated that the mixture alters very little in strength, except in the first instance. Experimenters have sometimes been mistaken as to the fatal proportion of chloroform in air, through using potash to absorb carbonic acid; this substance rapidly decomposes chloroform. Once more, the working zone for protoxide of nitrogen is more extensive than for the substances specified; the ratio between the limiting doses being one to three.—*London Medical Record.*

Dyspeptic Ulcers of the Tongue.

MR. SEWILL, writing to the *Lancet* in reply to a query "as to the best remedy for the above," expresses the desirableness of "carefully searching for evidence of syphilis" in the case mentioned by the correspondent. He further says: "Obstinate ulceration of the tongue is in many cases due to this disease, and yields to specific treatment, whilst the patient may often deny that he has had any infection, or—and I could narrate cases—may be really unaware of the fact."

Dr. R. N. Khory, in replying to the same correspondent, says: "If your correspondent, 'Young Surgeon,' uses solid nitrate of silver as a local application persistently for some time, or the solution of the bichloride of mercury as a gargle for the mouth, he will find the ulcers heal without any fresh ones breaking out. In such cases I have invariably given chlorate of potash with small doses of the solution of bichloride of mercury and liquid extract of cinchona internally with good results." And "Omega," writing upon the same subject, recommends:—"Locally, some stimulating application to each spot, such as lightly touching with nitrate of silver. Internally, the administration of iron with arsenic either in the acid or alkaline form. The diet should exclude hot, spiced and stinging ingredients. In such cases the previous history will, he thinks, generally reveal some marked delicacy of the constitution. Such spots often seeming to accompany eruptions on the skin of the face or body."

These answers can scarcely be considered altogether satisfactory,

except on the supposition that the ulcers in question were not really "dyspeptic" at all. For although it is true that dyspeptic ulcers of the tongue frequently occur in persons of weak constitution, such remedies as bark, iron and arsenic, do more harm than good unless the gastric catarrh, on which the presence of these ulcers appears to depend, has first been relieved by careful regulation of the diet and the administration of such remedies as bismuth, magnesia alba, or small doses of the alkaline carbonates.

The subject is of interest to the Dental Surgeon, as such ulcerations often interfere with the comfortable wearing of artificial dentures.

Thumb-Sucking.

In the *American Journal of Obstetrics* of October last Dr. Goodwillie narrates a very bad case of thumb-sucking in a child of four-and-a-half years of age. The incisor teeth were all forced outwards; there was considerable nasal catarrh, and some deformity of the nose itself: This had been produced by the child going to sleep with its thumb in its mouth, and its index finger pressing on its nose, thus flattening the cartilages, and forcing them to the side; there was very little respiration through the nose. Dr. Goodwillie applied a pad with a stout band of leather strapped round the elbow joint; which, though allowing some movement of the joint, completely prevented the hand from reaching the mouth. The result was perfectly successful, all the abnormal conditions disappearing with the removal of the cause.

The Smoke Abatement Exhibition.

WE regret that in the notice of this Exhibition which appeared in our last number, we omitted to call attention to a very ingenious and apparently satisfactory grate invented by Mr. A. B. Verrier, L.D.S., of Weymouth, and exhibited by Messrs. Morgan and Waide, of Queen Street, Cheapside. It is so constructed as to be very economical of fuel, consumes its own smoke, and is at the same time handsome in appearance, and gives an open cheerful fire. It is also an efficient ventilator, air being admitted from outside the room into a chamber at the back of the fireplace, where it is warmed and then discharged into the room through openings in the upper part of the stove. An outlet ventilator for foul air can also be fitted in connection with it; the tube opening, not into

the chimney as it usually does, and which results in occasional escapes of smoke into the room, but into the lower and back part of the grate, so that a steady draught is maintained by the fire, and the foul air itself is at once burnt. The stove, which for some unknown reason has been christened 'the Comet,' though somewhat complicated in construction, is perfectly simple in action, and would appear to be eminently suited for dental operating and waiting rooms.

Drs. Atkinson and Parmly Brown 'at Home.'

AT the opening Meeting of the First District Dental Society of New York, some of the Members who had lately returned from the London Congress were requested to give some account of their experiences. Drs. Atkinson and Parmly Brown were the principal respondents, and the following is the substance of their remarks, condensed from the report of the meeting given in the December number of *Johnston's Miscellany*.

"Dr. ATKINSON said it afforded him great pleasure to stand before them that night, and he wished he had the ability to communicate to them the manifold experiences he had passed through since last he left them. As far as kindness and hospitality were concerned nothing could be more complete or satisfactory than the manner in which they were treated in Europe; but to men who went there with the expectation of being advanced scientifically, if all their experience was the same as his was, that matter would have to turn up under the head of disappointment. They had a magnificent gathering of some three thousand members, but it was actuated more rigidly by rules and regulations and old-fogy methods than their American Associations laboured under. They had some clinics there, but the best portion of their best men would not compare with the American fourth-rate men. Their best finishings were bad; they were like the old finishings, and how so intelligent a body as the English public could put up with them was a marvel to him. They were as much behind as the Americans were thirty years ago. The mass of the English dentists were just outside the court circle." The speaker then referred to his reception by the President of the Odontological Society, of whom he spoke in very high terms.

Dr. E. PARMLY BROWN said he was treated magnificently in London. 'They were not, in London, up to the mark in operative

dentistry. They were not equal to the American dentists. They were twenty-five years behind the age in operative dentistry. They wanted in England, however, to learn, and if they had some good operators there they would soon learn. The American operators in London retrograded—they went back after being there some time. It required a good dentist indeed to go over there and go ahead of the prejudices of the country. The second day's clinic was the American dentists clinic. The English dentists got very much interested in it. They were, in fact, surprised, and he would not be astonished if they had a lot of them over here to learn. One of the professors proposed to Dr. Campbell and the speaker to give a clinic, and said that perhaps they would get some others to join them. They telegraphed them (the Americans) at Paris that they had twenty-five to join in the clinic and that they contributed 500 dollars to pay expenses. So they went back to London and spent a week clinicing. They were as fine professional gentlemen as he (the speaker) ever met in his life. They attended the clinics from an early hour until late at night, and these gentlemen were from Scotland and England. They paid their money to learn. He (Dr. Brown) enjoyed the seven days' clinic very much."

The Physiological Action of Amalgam Fillings.

THE *Ohio State Journal of Dental Science* for January devotes considerable space to the discussion of the amalgam question. An article contributed by Dr. E. S. Talbot, of Chicago, describes some striking experiments of great interest and originality. Thinking the alleged delcterious effects upon the system of the mercury contained in filling alloys could not arise from chemical action in the mouth, the author undertook to test the possibility of mercurial evaporation at ordinary temperatures from the metal and its amalgams. The ordinary gold leaf test giving only negative results, ammonio-nitrate of silver and chloride of platinum were tried as re-agents. Paper was wetted or written upon with solutions of these, and held in the neck of a wide-mouthed bottle containing the substance to be tested. Should mercurial vapour arise the liquid would blacken. Fillings, hardened, made of the Chicago Refining Co.'s alloy (3 parts mercury to 8 of filings) blackened the paper in 10 minutes, at 98° F. Old amalgam fillings, 6 months, 2 years, and 16 years old (in the mouth), tried separately, gave similar indications in a few hours. Blank observations with empty

bottles—filings alone, etc., were made in all cases to check the experiments, which were carried on in the dark. Guinea pigs and roaches were killed by exposure to mercury and also old fillings. Other experiments were made upon plants and animals. The author concludes with the hypothesis that inhalation of mercury vapour from alloys in the mouth produces through the lungs poisonous effects. Commenting on the article, the editor (Dr. Watt) confirms the experimental results and the inferences from them, and recounting well known cases of mercurial poisoning by inhalation, cutaneous absorption, &c., denounces absolutely the use of all mercurial preparations in dentistry.

The Dental Diploma Trade.

(From the Medical Press and Circular.)

WE wonder how long the sale of collegiate licenses in dental surgery to hair dressers, tobacconists, and druggists' assistants, will be allowed? At present the Colleges of Surgeons of Edinburgh and Dublin, and the Faculty of Physicians of Glasgow, are doing a roaring business in dental diplomas, and, so far from showing a disposition to cry halt, they are advertising, far and wide, their readiness to take the money of anyone who likes to buy a parchment with which to decorate his shop. Our readers know already that, when that unhappy blunder, the Dentists' Act, passed, a multitude of persons were co-opted as dental surgeons, and placed on the roll of legalised practitioners, the great majority of whom did not make any pretence of knowing anything whatever about dental anatomy or surgery, and did not set up for any higher degree of professional skill than is involved in pulling a nail out of a board.

The great majority of the new-made dentists, indeed, never had had the least notion of being recognised as dental surgeons, and they could hardly believe in their new dignity when they awoke to find themselves ennobled by admission to the dental roll.

There is no exaggeration in this statement. From the Dental Register of 1881, we find that 5,266 persons are entered therein. Of these 565, or one in ten, has been examined, and found to know something of the art, while the remaining nine-tenths (4,698 in all), are uncertified pretenders to dental knowledge. Of this latter class about 2,000 are persons who, with or without knowledge of the subject, devote themselves to dentistry as a means of livelihood. The remaining 2,600 persons are, confessedly, hair-dressers, barbers, druggists' assistants, and other persons who would not, if they could be asked the question, lay claim to the minutest portion of dental knowledge, skill or experience. Several of them, indeed, *have* been ques-

tioned by the General Medical Council, and have, one and all, candidly admitted their total ignorance of the subject.

It was bad enough that the profession of dental surgery should be degraded by the admission of these 2,600 persons, but the injury which the profession sustained thereby was somewhat mitigated by the fact that everyone in the profession knew that dental registration was rather a proof of ignorance than of competency. The greediness of the licensing bodies, however, is likely to aggravate greatly the evil to which the Dental Act gave origin. When the Act passed, the London College of Surgeons—to its credit be it said—steadfastly resisted all importunities to give its license in dental surgery to anyone whose respectability and whose competency it had not tested, and still, even though the Medical Council intimated that it would not object to the sale of diplomas, the London College has refused to engage in the trade. The Colleges of Edinburgh, Glasgow and Dublin, however, were not so punctilious. The two Scotch Colleges at once intimated to the General Medical Council their readiness to take the money of every one of the 5,000 unqualified men on the Dental Register, and they have lately intimated that they have no intention to cease from so paying a business. The Irish College of Surgeons took a different course—it declared that it would keep its doors open for two years from the passing of the Dental Act (*i.e.*, about one year from the holding of the first examination), and for not a moment longer, and it sent to the General Medical Council regulations formally adopted by the College, which declared that after the first of August, 1881, no one should be granted a diploma until he could show that he had studied dentistry according to a proper curriculum.

This decision the Council of the College has recently, we regret to hear, gone back from, without even the approval of the Medical Council, to whom it had given its previous promise, and, in conformity with this resolve, a new dental examination is advertised, to which the whole of the *cannaille* of the Dental Register will be admissible if they can get the signatures of two or three practitioners of their own class to their letter of application.

On the part of the Licentiates and Fellows of the Irish College of Surgeons, we emphatically protest against the issue of diplomas to such people, to be hung up, no doubt, in the tobacconist's or barber's shop, alongside the advertisement placards of "Bristol Birds-eye," or the "Marvellous Hair-Restorer," and we utterly repudiate the theory that the College is justified in departing from its engagement with the General Medical Council, or in granting licenses on any subject to persons of whose education in the subject no guarantee exists.

On behalf of the profession of dental surgeons, we would suggest that it will be needful for them to protest against the collegiate decoration of persons of this class with whom the Dental Act has overwhelmed them. The British Dental Association is, no doubt, able to

take care of itself, and we have confidence that it will do so, but it is, at least, right that we should let the Fellows and Licentiates of the three Colleges, and the more respectable dental surgeons, know what is being done towards a further degradation of their Colleges and their profession.

“THE DENTAL DIPLOMA TRADE.”

“TO THE EDITOR OF THE MEDICAL PRESS AND CIRCULAR.

“SIR,—The trenchant observations made in your last issue on this subject deserve the most serious consideration, not only from the Royal College of Surgeons of Ireland and other licensing bodies, but also from every member of repute in the dental profession.

“These observations will, I hope, rouse so much attention to the matter as may stave off dangers that, in the present state of things, threaten not only the dental profession as such, but also the very reputation of the College itself.

“I do not attach so much importance to the rescinding of the rule laid down by the College—namely, that after October, 1881, no dentist should be admitted to examination who did not go through the regular curriculum. For there are, I am aware, many respectable men who were in the practice of dentistry long antecedent to the passing of the Act, who, from one cause or another, were prevented from taking advantage of the two years’ grace, though it may have been their desire to have done so. That such should now be compelled to fall back upon the curriculum, after a long day of practice, as the only means of obtaining the *imprimatur* of the College, might be considered harsh, if not unjust.

“I think little of the relaxation of the rule when it is designed to meet in a professional and friendly spirit the wishes of these persons, in the obtainment of the College diploma neither its reputation nor the efficiency, and reputation of the profession suffer. But if it be rescinded and the doors of the College kept open for an indefinite period, other than the means hitherto adopted must be resorted to in order to prevent unworthy applicants from admission to examination.

“I have studied carefully the *modus operandi* by which admission has been obtained, and I am fully convinced that it is, and must ever be, defective, especially so in regard to the dental profession, which is only yet in a state of transition.

“The recommendation of two surgeons and two dentists of repute—the rule at present in operation—must be in many cases a deceptive passport. Such introductions have been, and can be, obtained from both surgeons and dentists by many persons who have no claim, by practice or otherwise, to admittance to the examinations.

“A glaring instance of this kind occurred at one of the examinations. A person presented himself armed with the necessary forms, went in.

and passed, and I found after, as I suspected at the time, that this person was no other than a notorious quack doctor, which quackery he continued to practise until he was positively criminated.

"Taking this view, I venture to think that continuing the examinations cannot fairly be objected to, but proper precautions and stringent measures are absolutely necessary to ensure eligibility of candidates. To discontinue the examinations would simply mean to drive candidates from Dublin to Edinburgh or Glasgow. This would certainly be no advantage to the candidates or the public; and it would be as certainly a disadvantage to our distinguished Irish institution.

"The great drawback, then, as I see it, is not in the continuance of the examinations beyond the period originally set down, but in the mode by which candidates are admitted.

"How then, it may be asked, should they be admitted? Not on the recommendations of doctors or dentists, but, as I would venture to point out, on the official authority of some recognised association or body interested in the dignity and well-being of the profession, and, therefore, bound to inquire into the antecedents of the persons before recommending them.

"You, Sir, in your pointed comment, hint, I apprehend, at the adoption of some such course. You say, 'The British Dental Association is able to take care of itself, and we have confidence that it will do so.' Taking care of itself means, I believe, taking care of the interests of the profession; and when I mention that the Association is formed on the same lines as the British Medical Association, I think that there could be no better medium for recommending suitable persons to the College.

"Hoping that the *Medical Press and Circular* will not lose sight of this important question,

"I remain, Sir, yours faithfully,

"JOHN O'DUFFY, L.D.S., R.C.S.I.

"58, Rutland Square West, Dublin,

"Jan. 12, 1882."

Annotations.

It may be well to call attention once more to the fact that after the next meeting (March 6th) no candidate will be eligible for the membership of the Odontological Society unless he possesses a qualification by diploma approved by the Council of the Society; this is in accordance with a resolution passed by the Society some months ago. Intending candidates who fall within the category to which this regulation applies, would do well to lose no time in sending in their applications, as there is not the least probability that the period of grace will be extended.

THE *Medical Press and Circular*, in one of the articles elsewhere referred to, speaks of a Dental Licentiate of the Irish College who was found keeping "a small drug grocery," whatever that may mean, in a small back street, and who was caught in his shirt-sleeves bringing home his dinner beer. Surely this is weak; has no one ever heard of a Cambridge graduate turned billiard-marker, or a M.R.C.S.Eng. driving a cab? Besides, we know not what may have been the habits of the keeper of the "drug grocery" before he obtained the diploma of the Irish College. Perhaps under its baneful influence his previously flourishing dental business had fallen away and left him minus coat and errand boy; or perhaps his errand boy had gone to Dublin to get a diploma for himself, and had borrowed his master's coat for the occasion; or perhaps—but we forbear, the possibilities suggested by this picture of the coatless beer-carrying drug grocer are really too numerous.

THE *Druggists' Circular* gives the following as the composition of "Sosodont," an American dentifrice which is widely advertised:—

Castile soap	...	...	...	75 grs.
Glycerine	...	...	...	75 grs.
Alcohol	...	...	...	1 oz.
Water	...	...	...	5 drms.
Oil of Peppermint	...	...	} a sufficiency.	
Oil of Cloves	...	...
Oil of Cinnamon...	...	...
Oil of Aniseed	...	...

THE December number of *Johnston's Dental Miscellany* announces itself as the last of its race. A few months ago the firm of Johnston Brothers, of Broadway, New York, by whom the *Miscellany* was published, was amalgamated with the S.S. White Dental Manufacturing Company; the managers of this company have come to the conclusion that one journal is enough for them, and that they will concentrate all their attention on their own special protégé, the *Cosmos*. We are not sure that the general level of American Dental Journalism would not be improved by a little judicious weeding, but there are certainly periodicals which could have been far better spared than *Johnston's Miscellany*.

LOOKING through a recent number of an American Dental Jour-

nal of some twelve years' standing, we find the following to be an analysis of its contents. Out of forty-eight pages twenty-five are taken direct from the back numbers of this Journal—for the most part, we are glad to add, with due acknowledgement. Other British and foreign journals supply another eight pages, while original articles, editorials, reviews, reports of societies and dental news together make up just fifteen pages. We are highly complimented by the evident appreciation thus shown for our matter, but we hope our subscribers will never allow us to be reduced to similar extremities.

THE Anniversary Dinner of the Licentiates in Dental Surgery and Members of the Odonto-Chirurgical Society will take place at the Balmoral Hotel, Princes Street, Edinburgh, on Monday, March 13th, at 6 p.m. Andrew Wilson, Esq., L.D.S.Ed., in the chair.

At the meeting of the Odonto-Chirurgical Society which will be held the same afternoon, there will be a discussion on "The Dental Curriculum of the Medical Council," and a paper will be read by Principal Williams, F.R.S.E., on "Abnormal Dentition in the Horse."

EVERYONE who knew him will learn with most real sorrow that Dr. M. S. Dean, of Chicago, has passed away from amongst us. The news of his death arrived at the last moment before going to press, too late for a full notice in this number.

MR. EDWARD DAGNALL, formerly a Member of the College of Dentists, died at Battersea on the 21st ult., from stricture of the œsophagus, in his 63rd year.

Correspondence.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Can the curriculum for the Licence in Dental Surgery be improved? This is a question which we may well ask ourselves in these stirring times, and the answer is of much importance. It would be claiming too much for the fallibility of mankind and his works to say that the present curriculum is perfect; and this leads

us to consider *how* it can be improved. To add to the number of subjects would appear unwise, if it can be avoided, seeing that the time allotted is all too short for the efficient carrying out of the present provisions.

But without greatly increasing the strain upon the student, it is not difficult to point out wherein some change for the better might be made, in the event of any fresh legislation with regard to the Medical and Dental Acts during the present session of Parliament.

In the first place the question raised by Professor Turner is worthy of much consideration, and in the event of the opinion of the Medical Council being asked for by the Government with reference to further legislation, it would be well for them to point out how much better it would be if the student were allowed to count time spent in the work-room at Mechanical Dentistry *before* passing the preliminary examination in arts.

Then again, if the student were called upon to act as an in-patient dresser for six months he would learn more in that time than in the two years of so-called hospital practice, though this need not be shortened. I should also very much like to see another addition made to the curriculum, and that is that the dental student should be required to act as clinical clerk in the medical wards during not less than three months, and to produce evidence of having attended post-mortem examinations during this time and during his in-patient surgical dressership.

By a recent edict of the Council the student is relieved of twelve lectures on Mechanical Dentistry, and it would be well indeed if he were obliged to produce, instead of this, evidence of having adapted artificial teeth to the mouths of patients.

There is one course of study which Mr. Tomes at the Congress urged upon students to take up voluntarily, but which I should like to see compulsory, and that is Practical Physiology; the importance of this branch of study is so self-evident that there is no need for me to enlarge upon it.

In conclusion, I would express a hope that the practical dental work may not be curtailed, or encroached upon in the slightest degree.

I am, Sir,
Yours, &c.,
S. J. HUTCHINSON.

Answers to Correspondents.

M. O. S.:—We cannot inform you what has been done by the Committee which was appointed some time ago by the Odontological Society to investigate the properties of Plastic Fillings. Their first Report was published nearly two years ago, and we hope we may have another from them before long, even if it should be no more than would suffice to excite a discussion on this very important practical question.

JUNIOR:—Tripolite is composed of lime, silica, and ferrous oxide. It is about 14 per cent. lighter than plaster of Paris, is said to be less liable to deteriorate from exposure to the atmosphere, and is somewhat cheaper than ordinary plaster. We have heard that it has been used by members of the profession, but have no personal experience of it ourselves.

A MEMBER:—It is no offence against the law to practise Dentistry without being registered. Any person can practise Dentistry, or any other branch of Medicine, or Surgery, subject to certain risks, whether he be registered or not; *but no person may assume professional titles* unless he be registered, and any unregistered person calling himself Dentist, or Surgeon-Dentist, or placing initials after his name, with the view of giving the idea that he possesses a Surgical or Dental qualification, is liable to prosecution. Apparently you are not the only one who loses sight of the distinction we have just pointed out.

Books and Papers received.

TOMES' Dental Anatomy, 2nd edition, Ohio State Journal of Dental Science, British Journal of Dental Science, Dental Cosmos, London Medical Record, Independent Practitioner, Lancet, British Medical Journal, Transactions of Odonto-Chirurgical Society, Le Progrès Dentaire, Dental Record, Correspondenz-Blatt für Zahnärzte, Pharmaceutical Journal, Medical Press and Circular, Chemist and Druggist, &c., &c.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

THE MEDICAL DIRECTORY FOR 1882.

We desire again to remind our readers that Messrs. Ash are acting as agents for the supply of the above work to Members of the Dental profession, and that all practitioners are particularly requested to order their copies through Messrs. Ash.

SUBSCRIPTIONS.

Members are reminded that Subscriptions for the current year are now due, and are particularly requested to forward them without delay to the Treasurer, at 40, Leicester Square.

THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION A MONTHLY REVIEW OF DENTAL SURGERY.

No. III.

MARCH 15, 1882.

Vol. III.

Branch Associations.

THE notice from the Hon. Secretary of the Midland Counties Branch that their next annual meeting is to be held at Leeds on the 26th of next month, reminds us of the new life which is gradually but surely pervading the profession, and of the important part which Branches discharge in the diffusion and sustenance of this vitality.

As the ganglia of the nervous system planted in various parts of the human economy gather up and modify and reinforce the currents emanating from the great central power, so do the branches, taking up and appropriating the spirit of the profession at large as embodied in the British Dental Association, diffuse it in their various localities. They are the local centres which bring the outlying portions of our profession into intimate and continual communica-

tion with the body corporate ; and if ever our Association becomes the useful and influential body we hope to see it become, it will be greatly through the influence of such institutions as Branch Associations.

That the Midland Counties Branch is to hold its annual meeting as usual, and that, too, with every prospect of a satisfactory and interesting programme, is to our mind a satisfactory and gratifying assurance of the vigour of its executive, and of its members. Considering the place chosen for the annual meeting of the General Association, this particular Branch might, under less active impulses, have been content with a short business session, and reserved its energies and its garnered knowledge for the Liverpool meeting in August. Such, however, is not the case, and the fear that the demands of the annual gatherings of the Association would in a measure impoverish the Branches, has not in this instance been verified. The theory of those who assume so much wisdom, and tell us that the country should be divided into districts, and that each district should have its independent association, so that the profession may not lose its character and independence under the overshadowing influence of a large and united body, seems to be rudely dissipated by the action of the Midland Branch. Without pausing to find out what kind of autocratic power could take up the country and divide it into districts, and by what authority it could act, we can point to the action of the Midland Branch as demonstrating the wisdom and policy of the present arrangements ; for, not only is it able to carry on its own affairs as usual, but its executive is at present engaged in making the necessary arrangements for the reception of the general body in August next, and we understand that the use of the rooms of the Medical Society of Liverpool have already been granted for the meetings. Evidently the

paralysing influence of a central body has not yet been felt by the Midland Branch.

With such examples before us as the already existing Branches afford, it will become easier for the dental practitioners in other localities to proceed in the task of organisation. There is the Southern district yet unoccupied. In the Eastern Counties there is a satisfactory movement more than begun, and of which we hope to hear more ere long; but in the Northern Counties there is, as yet, no sign of any union of the kind.

Scotland, too, seems to be losing its usual place in the van of progress, for although possessing two Dental schools and two Dental licensing corporations, it has as yet but partially recognized the advantages of such combinations as have been formed in England. We cannot help thinking that, although the profession at large suffers from this unusual want of foresight amongst the men of Scotland, yet Scotchmen themselves are the greatest sufferers by their dissociation from the well-planned organisation of the British Dental Association. Still each requires the assistance of the other, and the necessarily slow, but important, process of enlightening the public on the matter of Dental Education and the claims of Dental Surgery to rank as a liberal profession, can make but little headway unless the influence employed assumes a more national character than it does at present.

When the happier time comes which we all so anxiously look for, we may hope for a glimpse of professional unity in Ireland, for which at present we look in vain.

The Balance Sheet for 1881.

THE success of the Association that we predicted a year ago is well shown in the Balance Sheet issued by the Treasurer in the present number of the Journal.

There is notable evidence of real progress, as indicated by the indisputable logic of pounds, shillings, and pence. We do not desire to attach any importance to the amounts recorded as merely financial statements, but we consider that they are of the utmost value as indicating the measure of esteem in which the Association and its Journal are held by the Profession, and the sure indication that such a Balance Sheet gives of the future influence of our organization.

The total amount of receipts for the year reaches in this (our second Balance Sheet only) a very fair sum, and judged by the progress made during a corresponding time in the early days of the British Medical Association, we may be more than content—we may be perfectly assured that the British Dental Association has taken, and will be able to maintain, the leading position amongst the organizations of the Profession.

There still appears the inevitable item of Legal expenses, but we may, perhaps, recognize this expenditure as useful, if the advice that has been purchased so dearly saves us from unnecessary expense in the future. There are many points in regard to recent Legislation and the action of the General Medical Council that require clearing up, and it is manifestly the duty of the Executive of the Association to seek such professional assistance as may be necessary, whatever the cost.

We are doubtless doing much for which we shall not be thanked by the present generation of Dental Surgeons, but the future members of the Profession will, we believe,

recognize the fact that from the passing of the Dentists' Act to the present time substantial results have been obtained in the process of consolidating the department of Dental Surgery as a branch of general Medicine.

We desire especially to draw attention to these points, as many of our members may have expected greater results in the present than have been capable of realization. Those who have done the work may, however, rest satisfied that their labours will be fully appreciated in the future, whilst those who have deemed themselves as most intelligently occupied in looking on must learn that no great enterprise is ever carried to a successful and permanent ending without the exercise of "the infinite magic of patience."

ASSOCIATION INTELLIGENCE.

Midland Counties Branch.

MEMBERS having Papers or "Casual Communications," to present at the Annual Meeting in Leeds, on April 26th, are requested to send notice of the same to the Secretary on or before March 31st.

Subscriptions are now due, and should be forwarded to the Treasurer, S. Wormald, Esq., Wellington Road, Stockport.

W. H. WAITE, *Hon. Sec.*,

10, Oxford Street,

Liverpool.

British Dental Association.

STATEMENT OF ACCOUNTS FOR THE YEAR 1881.

ON the next page will be found a statement of the receipts and expenditure of the Association during the year 1881. In comparing the amounts here given with those found in the financial statement, which was published in our March number last year, it must be noticed that the latter covers a period of eighteen months—viz., from July 1st, 1879, to December 31st, 1880, whilst that now published is for twelve months only. A balance sheet, showing the financial position of the Association at the close of the year, is also given.

THE BRITISH DENTAL ASSOCIATION.
Receipt and Expenditure Account for the Year ending December 31st, 1881.

Dr.

Cr.

	General Account.	£	s.	d.
To Rent .. .. .	.. .. .	12	12	0
" Law Expenses .. .. .	.. .. .	77	2	2
" Auditor's Fee .. .. .	.. .. .	5	5	0
" Stationery—Sundry copies of Dental Register	£35 15 0			
" Sundry Stationery, Postage, &c.,	20 17 8			
" Printing—Additional copies of the Journal for distribution at the International Medical Congress, &c.	56 12 8			
" Gratuity (porter)	44 16 11			
	3 3 0			199 11 9
" Stock in hand, 1st February, 1881 .. .. .	.. .. .	14	12	10
" Printing, &c. .. .. .	.. .. .	294	0	7
" Salaries .. .. .	.. .. .	63	2	0
				371 15 5
" Balance carried down .. .. .	.. .. .	571	7	2
		353	7	7
				£924 14 9

	General Account.	£	s.	d.
By Subscriptions—As per List	£390	12	0
" " Outstanding	45	3	0
		435	15	0
Less amount credited below to Journal Account	153	13	0
" Dental Reform Fund—Amount transferred	221	11	0
		289	2	0
" Subscriptions (as above)	153	13	0
" Sundry Sales	45	2	9
" Advertisements	186	3	9
" Stock in hand, 31st December, 1881	33	2	3
		421	1	9
" Balance brought down	£924	14	6
" Balance from last year:—	353	7	7
General Account	92	9	6
Journal Account, Goodwill regarded as an Asset	£900	0	0
Less Balance, 1880	54	5	7
		145	14	5
		238	3	11
		£591	11	6

THE BRITISH DENTAL ASSOCIATION.
Balance Sheet December 31st, 1881.

Dr.

Cr.

	Liabilities.	£	s.	d.
To Receipt and Expenditure account—Balance	591	11	6
" Debts owing by the Association	192	10	1
" Subscriptions, 1881, received in advance	14	7	0
				798 8 7
" Balance carried down	798	8	7

	Assets.	£	s.	d.
By Dividend Reserve—Amount paid for Goodwill	200	0	0
" Debts owing to the Association	351	7	10
" Subscriptions, 1881, outstanding	45	3	0
" Stock, in hands of publishers (Smith, Elder & Co.)	33	2	3
" Cash at Bank of England	168	15	6
		798	8	7

HOSPITAL REPORTS AND CASES IN PRACTICE.

Dental Hospital of London.

A REMARKABLE ODONTOME.

BY A. S. UNDERWOOD, M.R.C.S. AND L.D.S.ENG.

I RECENTLY removed an upper molar at the Dental Hospital which, when examined after extraction, presented a peculiar outgrowth from the posterior buccal fang, about the juncture of the enamel and cementum. The accompanying peculiarities of the tooth were so unusual that I have no doubt they will prove interesting to your readers.

The posterior buccal fang is dwarfed and curled round at the point. The outgrowth is of an oval shape, about the eighth of an inch in length; the upper extremity is covered with enamel, the lower and greater part with cement; at the lower extremity is an opening large enough to admit the point of a pin. On section the growth proves to be hollow, and its wall excessively thin (about $\frac{1}{8}$ of an inch). It has contained pulp tissue. Side by side with this growth is a depression, about the same shape, but a little smaller, surrounded by a ridge of cementum. On further examining the section, a more extraordinary abnormality was apparent, which I believe to be unique. In the midst of the enamel (which is unusually thick at this point) over the anterior internal cusp is a round hole, unconnected with the surface and unconnected with the pulp, filled up with a ball of calcified substance which is not loose, but probably attached at some point. This condition of the enamel, *i.e.*, its encroachment upon the dentine, must have been in existence at the commencement of calcification. There are two other points in the enamel which are apparently commencements of a similar arrangement.

On microscopical examination the ball above alluded to proved to be enamel, and also the wall of the odontome. The general disturbance of the enamel must have depended upon some cause that affected the enamel organ and the bulb before any calcification had begun, but the results of this cause, whatever it may have been, are difficult to explain. The huge excess of enamel and the small amount of dentine in the crown make the tooth appear as if the dentinal portion of a very small one-cusped tooth had been made up to the form and size of an ordinary upper molar with enamel.

Loss of Four Teeth owing to the Misuse of India-rubber Bands.

By W. G. DAISH, L.D.S, Eng., Ryde, Isle of Wight.

In Mr. Salter's "Dental Pathology and Surgery," mention is made of a case in which two central incisors were lost from an india-rubber band, used for regulating purposes, passing over the necks of the teeth into the sockets, and so causing their death. This has always impressed me with the necessity of using extreme care in the employment of india-rubber bands, and as it is a subject not often written upon, an account of the following case may prove interesting to the profession.

W. E. S., æt. 11, was brought to us to have his mouth examined on account of pain in his front teeth. He had been under treatment for the purpose of regulating his four upper incisors, and when we first saw him they were all four quite loose, and, to some extent, projecting out of the mouth. There was a space of at least the eighth of an inch between the two centrals, and the central and lateral of either side were so loose that if one were touched both would rock about together; the gums, at the same time, were in a very inflamed condition, and the patient was unable to make the slightest use of his teeth. Owing to the lad's inability to speak plainly, we had some difficulty in making out all that he wished to tell us as to his previous treatment, but he gave us to understand that he had been to a dentist to have his teeth regulated, and that this gentleman had put an india-rubber band round the central and lateral on either side to draw them together, at the same time giving him a box of rings to use himself, as he was going away to school. The lad did not seem to have received any distinct idea that he should take off the old band before putting on a new one, so had been placing one over another, and told us he thought there were now about six bands on the two sides of the mouth, but could not say how many there were on each.

On looking carefully at the left side, the edge of a band was seen buried in the gum behind the two incisors, and was removed by a bent probe, but we suspected that there were other bands more deeply buried, and with some difficulty—causing a little pain and slight bleeding—two more were brought away with a small hoe excavator.

We then turned our attention to the central and lateral of the

right side, but they were so extremely tender that the lad begged us not to touch them, saying he did not believe there were any on that side. However, the appearance of the gum led us to think otherwise, as there was a distinct tongue of gum hanging down over the two teeth, and on lifting it away a probe could be passed up for some distance. We were not certain of the presence or absence of a band by using the probe only, so the tongue of gum was lifted away with the probe, and the fine hoe excavator passed up, when the rings were distinctly felt, and we succeeded in bringing down three all twisted together. This was followed by some bleeding, and as the patient intreated us not to do any more for him on that day, assuring us that all the bands were now removed, we sent him away for four days. On his return, the mouth was in a much better condition, the inflammation being diminished, though the teeth were nearly as loose as before. Another band was discovered round the two teeth on the left side, and removed; as the right side looked very much better, it was not interfered with, and the lad was sent away with instructions to use an astringent wash which we prescribed.

Four days later he came again, when the two teeth on the left side were found to be much firmer, and the condition of the mouth decidedly improving: The right central and lateral were still quite loose, but we did not probe for another band, hoping for continued improvement. After another three days, finding the two teeth on the right side still rather loose, and the appearance of the gum not satisfactorily improving, we determined to probe for another band—taking also into account, the probability of an equal number of bands having been used for each side of the mouth. The presence of a band was proved by a probe, and on carefully passing the fine hoe excavator up the socket, we succeeded in bringing away the eighth band.

Such an amount of injury had been done by the bands, that, although every effort was made to restore the gums to their normal condition and to preserve the teeth, it was found impossible to keep them in their sockets, and they were ultimately extracted on account of their excessive tenderness, and the great inconvenience they caused the patient—thus four beautiful teeth were lost from the misuse of india-rubber bands. This extreme case shows the necessity of never allowing the free use of such appliances; indeed, during the process of regulation, a constant supervision

should be kept by the dental surgeon over every case in which they are employed.

A Blaze of Ether.

I WAS called last night to the residence of one of my patients who had been suffering violently from toothache. She desired me to bring ether spray.

I found an upper molar, which had been stopped about three years with a large gold filling, the seat of greatest pain; it also had a sinus at the root. The young lady had an ulcerated throat, and was also suffering from catarrh. I suggested treatment to save the tooth, but she insisted on extraction. I commenced to use the spray, a candle being held close by. We had been spraying vigorously two or three minutes, when the patient's head was suddenly in a perfect blaze of fire.

She jumped up; I threw down my apparatus, and put my arms round her face, sweeping off the fire with my arms and hands. The flames were six or seven inches high all round the head and neck, and, fed by the ether vapour in the lungs, continued some time in a brilliant halo. We eventually extinguished them. It could not have been many seconds, but each second seemed an age.

The cheeks, nose, lips, ears, neck, and hair were badly singed—the skin very red and smarting. I called for castor oil, as being the purest likely to be in the house, smeared the parts over with this and applied cotton wool over all; this gave instant relief; we then sent off for the family doctor. I may say I had previously recommended that he should be asked to give ether for the extraction, but the young lady declined. The doctor brought some carron oil, which we applied.

This gentleman who is connected with a large hospital, said he had a case there of ether which took fire when the light was held a yard and a half off.

I do not send this as a unique case. I have read of such, and know the light should be held beneath and away from the rising vapour, but, in directing the spray, one does not always think of watching the position of the light, which in this case the lady was doing her best to direct upon the part. It was just one of those cases which may occur to anyone, and the bare record of these facts may cause someone to hesitate about so simple and in-

noxious a thing as ether spray, or even, ether, by candlelight, or lead them to provide a blanket, or woollen antimacassar. Very luckily the eyes were perfectly saved, and the burns not deep. A few days and all will be well, no doubt. It might have been far worse if the patient had been wearing a light dress, or nightdress, or if we had lost our presence of mind!

Cases do occur when ether must be given at night, and when we have not the advantage of our own illuminating appliances, and I suppose these accidents of practice will occur. It is easy to be wise after the event—may this make us wise before.

February 19th, 1882.

L.D.S.

REVIEWS AND NOTICES OF BOOKS.

The Origin and Formation of the Dental Follicle; the first part of a Memoir on the Development of the Teeth. By Drs. CHAS. LEGROS and E. MAGITÔT.

(Concluded from page 73).

THE dental follicle, the component parts of which are all thus grouped and inclosed in one sac, has a general ovoid form. Its size varies greatly in different animals, and according to the kind of teeth that are to be developed from it. When the follicle is completely formed, it remains inclosed within the embryonal tissues of the jaws, with which at first it is only feebly connected. Thus isolated in the depth of the jaws, having lost its communication with the mucous membrane (epithelium) by the rupture of the cord, it does not yet form any connection with the maxillary bone, for the formation of the alveolar partitions does not take place until a later period.

The network of vessels which ramify in the follicular wall and dental bulb is furnished from different sources, and enters these tissues from the surrounding parts, while the enamel-organ is non-vascular. The direction of the follicle, that is to say the great axis of the ovoid, is quite variable. Though regularly vertical in man and in the carnivora, it takes an oblique direction in the herbivorous animals, and this is more particularly marked in the follicles of the incisors. The latter, in fact, take an oblique and divergent course, like the spokes of a wheel, which is, moreover, in conformity with the inclination of the alveolar arch.

As soon as the epithelial lamina loses its connection with the follicle, by the rupture of the cord, the epithelial cells composing it become greatly increased in number at the severed point. This multiplication of cell-elements results in the formation of irregular buddings, which wander in different directions into the deeper portions of the embryonic tissue. These buddings vary greatly in form; sometimes they are simple cylinders, retaining their connection with the primitive lamina by pedicles of various lengths, and sometimes this slight connective is absorbed, thus isolating an epithelial mass. These masses are formed wholly of large polygonal cells, similar to those found in the centre of the epithelial *lamina*, but they are never like the latter surrounded by a layer of prismatic cells. Very frequently, however, groups of these elements take the globular form, and are in every respect similar to those which are sometimes discovered within the epithelial lamina itself. These different dispositions account for the presence of epithelial masses of such varied form, which, until now, were unexplained, and which are found in almost all sections of the jaws made at this epoch of evolution.

These phenomena of buddings cease at a certain period, which always seems to be anterior to the time at which the dentine makes its appearance in the follicle, and then all the epithelial fragments, and the lamina itself, undergo gradual absorption, and entirely disappear before the development of the tooth is perfect. Coincidentally with the phenomena thus effected at the expense of the epithelial lamina, a series of precisely analogous modifications takes place also in the severed cord; buddings, or processes, issue which at times are very numerous, as, for example, in certain preparations taken from the jaws of bovine embryos. These phenomena continue for a considerable length of time, since they can be observed up to a period even verging on the eruptive stage. The general form of these buddings may vary; sometimes they present somewhat the appearance of a bouquet (the foot corresponding to the summit of the follicle), which spreads, opens and continues to expand till it reaches the vicinity of the epidermis; at other times they form, by a multitude of reciprocal anastomoses, a perfect network, in the midst of which are still found some isolated masses.

While the modifications just described are being effected at the expense of the epithelial *débris* of the cord and the lamina, the embryonic tissue in which the follicles are immersed also changes

its nature, and some laminated elements appear therein, forming a loose and transparent network.

The osseous tissue of the jaws (no trace of which is seen at the time of the origin of the primitive cord) makes its first appearance near the base of the follicles from the horizontal layers separating the groove of the follicles from the canal reserved for the vessels and nerves. Lateral processes then arise from this layer or floor, and form the groove in which the follicles lie for some time without being separated by transverse partitions. But later, after the development of the crowns of the teeth has commenced, bony processes are thrown across this groove, forming cells for the lodgement of each follicle, with an opening towards the epithelial surface. A rich vascular network of tissue surrounds the follicle, and ramifies in the substance of the walls even to the surface of the enamel-organ, but does not penetrate it. The vessels of the bulb are entirely distinct, forming no anastomosing connection with the preceding plexus.

In microscopical sections taken from the jaws of human embryos measuring twenty centimetres from crown to heel, a *bourgeon* will be found at the point where the primitive cord merges into the enamel-organ of the temporary tooth. The general form of this bourgeon is cylindrical, terminating in a somewhat enlarged extremity, which gives it a clubbed or gourd-like shape at this stage of evolution, and may be seen quite distinctly with a low magnifying power of 100 to 200 diameters. It takes a generally vertical direction, and passes between the osseous alveolar wall and the primitive follicle, along the internal or lingual face of the latter. The elements of which it is composed are the same as those of the primitive cord, of which it is in reality only a *diverticulum*, or out-growth, that is, of polygonal cells covered with a single layer of prismatic ones. This bourgeon, or bud, represents the beginning of the permanent tooth, and after it has become sufficiently developed, it is easy to follow the subsequent phenomena of which it is the seat. It sinks to the bottom of the osseous dental groove, where it soon loses its connection with the primitive follicle, though still retaining its communication with the lamina: while the primitive follicle by the severance of its cord (which takes place just below the point where the secondary cord branches off) becomes isolated from its epithelial connection and continues its individual evolution.

It was, doubtless, by examining the jaws at the stage of develop-

ment just referred to, without taking into account the earlier and later phases, that led to the belief that the cord of the permanent teeth emanated from the *debris* of the primitive cord, or directly from the epithelial lamina.

The descent of the secondary bourgeon into the dental groove is soon followed by the entire series of phenomena which are common to every follicular evolution, and which are precisely the same as those already described for the primitive bourgeons. While these phases of development are being accomplished, certain modifications occur in the parts which surround the primitive follicle. The stump of the ruptured cord which remains attached to the primitive follicle, becomes the source of those fragmentary growths and buddings which have been described at considerable length in a preceding paragraph. These phenomena commence in the human embryo when it has attained about twenty-three centimetres (about $9\frac{1}{4}$ inches) in length, *i.e.*, about the fourth month; but in the embryos of other mammals they seem to occur a little earlier, relatively, in the period of gestation. This is the case in equine and bovine embryos. In the lower animals also the secondary bourgeon emanates from the primitive cord at a point a little farther from the primitive follicle than in the human species; this is the case in the ovine embryo.

Some differences are observed also as regards the direction of this secondary cord in the different species. Thus, while in the human embryo it takes a vertical direction, in those of the herbivora it follows a very oblique course, so that from the external side (not far from its connection with the epithelial lamina), passing above the temporary follicle, it pursues a curvilinear route to the internal or lingual face of that follicle. This arrangement of the parts may be seen clearly defined in sections taken from the incisive region of bovine, ovine, and equine embryos.

The point upon the primitive cord from which this secondary bourgeon emanates, as also the direction it takes, are not necessarily governed by the length of the secondary cord, for in the human embryo, although its direction is vertical, it is longer than in the equine, in which it takes a circuitous course. As a general rule its length is governed by the height of the alveolar border and the direction of the primitive follicle. In man and the carnivora this height is relatively more considerable, and besides the great obliquity that the primitive follicles of the incisors of the herbivora assume, allows the secondary bourgeon to cross directly over the

maxilla, and to place itself, after a very short passage, on the internal side of the primitive follicle, where its evolution is completed.

The cord of the secondary follicle in its descent into the jaws, always assumes a spiral form, and thus perfectly resembles the duct of the sudorific gland in the epidermis. This special disposition is so marked a characteristic in the secondary cord, that it may be readily distinguished from the temporary cord, for though the latter describes some sinuosities in its course, it is never so distinctly spiral as the former. The necessity for this greater *spirality* in the cord of the permanent follicle may be explained by the fact that it must traverse the more developed tissue of the jaw to a greater distance in attending this follicle in its passage to a point beneath that of the temporary tooth.

The spiral character of the secondary cord is especially obvious near its point of origin and in the first half of its course, but toward its terminal extremity it diminishes, and finally disappears entirely, giving place to a rounded club-shaped enlargement, exactly like that which was described at the extremity of the primitive cord. This enlargement or expansion represents the *enamel-organ* of the permanent tooth.

When the series of evolutionary phenomena has brought the new follicle to the period in which in the human embryo the bulb becomes *unicuspid* for the canines and incisors, and *multicuspid* for the molars, the epithelial cord, which has already been some time severed from the primitive follicle, becomes in its turn ruptured. From this period the secondary follicle, as well as the primitive, is isolated from all connection with the epithelial lamina during the subsequent phases of its evolution.

Such is the mode of genesis of the follicles of those permanent teeth which are preceded by corresponding temporary ones. Twenty of the teeth thus originate, but the first teeth that appear behind the deciduous set are produced by an entirely different mode of genesis. The *first permanent molar*, the follicle of which becomes considerably developed in foetal life, is derived from an epithelial cord which originates *directly from the epithelial lamina*. This cord penetrates the foetal tissue in a region where no follicle has preceded it.

The origin of the *second molar* is similar to that of the twenty permanent teeth, the follicle being produced from a diverticulum or out-growth of the cord of the first molar. In this respect the second molar sustains the same relation to the first that the per-

manent tooth does to the corresponding deciduous one. But they differ in the direction taken by the epithelial cords, for, while those derived from the cord of the temporary follicle pass over the lingual face of the latter to a point *beneath* them, that of the second molar takes a horizontal course for some distance, and then by an inflection takes its position at the *posterior* side of the follicle of the first molar, where it is developed in a line with those anterior to it. As regards the *last molar*, or *wisdom tooth*, its origin is effected in a manner similar to that just described, that is, the epithelial cord that produces its enamel organ is an emanation from the cord of the second molar.

The main facts of dental evolution are thus, in conclusion, summed up:—

1st. The dental follicles first appear as a cord emanating from the epithelial layer of the oral mucous membrane.

2nd. The cords that give origin to the follicles of the first dentition, arise directly from a process of the oral epithelium (epithelial band and epithelial lamina). The cords for those permanent teeth which succeed the temporary ones are *diverticula*, or outgrowths from the primitive cords. As for the cords of the permanent teeth, those for the first molars originate directly from the epithelium of the mucous membrane, and the remaining ones (eight in number) from the cords of the preceding molars.

3rd. The cord, whatever may be its point of origin, is invariably epithelial; it is composed outwardly of a layer of prismatic elements of the Malpighian stratum, and in the interior of polyhedral epithelial cells.

4th. The extremity of the cord, which soon takes the form of a club-shaped swelling, constitutes the *enamel-organ* of the future follicle.

5th. The *dental bulb* appears spontaneously in the midst of the embryonic tissue, and at a point in immediate proximity to the deeper face of the enamel organ.

6th. The enamel organ covers the bulb, serving as a cap for it, an arrangement which continues during all the periods of evolution preceding the formation of the dentine and the enamel.

7th. The follicular processes emanate directly from the elements of the bulb, and rise from its base to the summit of the follicle, where they unite and constitute the follicular sac.

8th. Synchronous with the closing of the follicles is the rupture of the cord, and from this period the follicle loses all connection

with the epithelium of the mucous membrane. The formation of the follicle is now complete.

9th. The evolutionary phenomena of the follicles in both dentitions are identical as to their nature, the only perceptible differences are in regard to the exact point from which the epithelial cords originate, and the length of time necessary to accomplish their successive phases of evolution.

10th. The mode of evolution of the dental follicle and of the pileous follicle is identical.

The work contains the appended useful table of the chronology of the dental follicles in man.

Tomes' Dental Anatomy. 2nd edition.

We are delighted to welcome a second edition of this very popular book. It is six years since the first edition came out, and during that time a good deal of work has been done that has a direct bearing upon the subject matter of Mr. Tomes' manual; we are interested therefore to notice what important changes the author has considered necessary, and our first impression on glancing through the volume is that it has changed very little. It is only 34 pages longer, and therefore it is obvious that as very little has been cut out, not very much can have been added. The main change is one with which students who have attended Mr. Tomes' lectures of late years have been long familiar, namely, the classification and description of the various dentines, vaso-dentine, osteo-dentine, plici-dentine, and hard unvascular dentine, and a little section describing the special modifications which the process of calcification presents in each variety. The recent researches of Bödecker (*Cosmos*, December, 1878) on the minute structure of enamel, are discussed under that heading, and though Mr. Tomes inclines to grant that there may be an intervening substance between the prisms, he does not consider Bödecker to have satisfactorily demonstrated its great importance as a nutritive protoplasmic network. Later on, we again find a reference to Bödecker, giving the result of his staining dentine with chloride of gold, and discovering a protoplasmic network derived from the dentinal fibrils, an observation which seems to have been very generally accepted. Lastly, this author appears again in the chapter on cement, and here also he demonstrates the presence of protoplasmic contents in the lacunæ and canaliculi.

Turning to the chapter on Development, we find the principal novelty, to be the "Cement Organ" of M. Magitôt. In the *Journal d'Anatomie*, M. Magitôt asserts that animals possessing coronal cement have a cement organ thick enough to be visible to the naked eye; he describes a development of "fibrocartilage" which ossifies in the crown, while the radicular cement results from an ossification of the under surface of the periosteum, an intra-cartilaginous and intra-membranous ossification, in fact; we do not, however, attribute the great importance to this statement that M. Magitôt claims for it, since recent observation has demonstrated the presence of cartilage in the deeper layer of the periosteum of the flat bones of the head. That the inner part of the follicle wall undergoes considerable developmental changes in Ruminants is undoubted; the only question is whether it is worth calling a cement organ. With regard to the calcification of enamel, Mr. Tomes holds to his old view that the process is a metamorphosis of the cell itself; both in this case and in that of the dentinal calcification M. Magitôt differs from him. The enamel calcification M. Magitôt describes as being without doubt an exosmosis through a "plateau" at the end of the cell; we still confess to a doubt, however, upon the point, and we do not see how M. Magitôt is going to explain the marsupial enamel quoted on page 157, in which the "Tomes' process" is twice as long as the cell; in such a case the "plateau" would become a sheath. Unfortunately, M. Magitôt fails to make his view perfectly clear, but it is possible that his plateau is simply that resistant semi-calcified tissue that is so frequently quoted as a membrana preformativa. In the case of the odontoblast calcification, Mr. Tomes also declines to modify his previously expressed opinion—though in this case M. Magitôt's account is perfectly clear, and his picture certainly is most convincing.

In the department of comparative anatomy the principal additions are the result of Professor Marsh's exceedingly interesting discoveries of fossil remains. The chapter on the teeth of birds is as a matter of fact a condensation of Professor Marsh's monograph (*Odontornithes*). The Eocene formations of Wyoming have also contributed another extinct order, the *Dinocerata* (page 340), nearly allied to the Proboscidea in some respects, but on the whole most resembling the *Perissodactyle Ungulates*, and, lastly, the most remarkable creature ever exhumed in America, for which Professor Marsh suggests the name *Tillodont*, a combination of *Carnivore*, *Ungulate* and *Rodent*.

Such additions make the book still more interesting and more valuable than ever, and we can most heartily congratulate the author upon the careful revision he has given his work.

The Dentists' Register, 1882. Medical Council Office, 229, Oxford Street, W.

It concerns every practitioner to know whether his name is recorded in the Register of the current year, for unless it appears therein, or in the *Medical Register*, he cannot use the title of dentist, or any equivalent designation, without breaking the law, and rendering himself liable to legal proceedings. The Register of the year annuls the legal authority of all preceding registers. It avails nothing that a person's name is to be found in the registers of passed years, and his only defence would be that the name had fallen out from carelessness or inadvertence on his own part, and is restorable. Section 12 of the Dentists' Act requires that registered persons shall keep themselves in postal communication with the Registrar. If a letter addressed to a person from that officer is returned to the Registrar by the Dead Letter Office, or if the Registree neglects to answer two letters, the latter of the two being a registered letter, his name will be removed from the Register, and with its disappearance all the privileges of registration are withdrawn. In order to avoid the trouble and cost of restoration to the Register, it is needful to notify to the Registrar changes of residences, and to answer without delay his letters.

Too much cannot be said in praise of the care and correctness with which the Register for 1882 is compiled, or of the abundance and completeness of the information it contains, though in general interests, and on some points of information, it falls short of the first issued Register—that for 1879—a copy of which should be preserved by every practitioner, and if not possessed, should be obtained*, for the interest of this will increase, as with each successive year, it records the history of the educational progress of the profession. We would here suggest, for the consideration of the Registrar and of the Medical Council, that the interest in, and the utility of the Register, would be enhanced if the details of the dental curricula were given, and if the names of practitioners were repeated under the heading of the towns in which they practise.

* Copies may be obtained of the Hon. Sec. of the Association.

On a future occasion we purpose entering into further details as respects the number of persons registered, and of the qualifications recorded. Everyone will certainly be struck with the singular activity evinced by the Irish College in conducting examinations, and the irresistible temptations offered in favour of candidature for the Irish license, and some persons may be prompted to ask for an explanation of the great numerical success of the western qualification.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

Odontological Society of Great Britain.

AT the ordinary Monthly Meeting of this Society which took place on the 6th inst., S. LEE RYMER, Esq., President, in the chair, Mr. ALFRED COLEMAN brought forward several remarkable and interesting cases. The first was a model, taken from an out-patient of St. Bartholomew's Hospital, showing a second or third molar protruding near the centre of the palate. The patient said that another tooth had previously presented itself in a similar position, and had been removed. He next showed a third left molar, in which the usual position of the fangs was reversed, the usual single palatine being external, and the double buccal fangs internal. The next case was one which had occurred in the practice of Mr. Lyons. In 1869 that gentleman pivoted an upper central and a lateral incisor for a female patient. The result of the operation was perfectly satisfactory, and the teeth continued useful until quite recently, when, owing to an attack of acute periostitis and alveolar abscess, they had to be extracted. Mr. Lyons then found that a large portion of the roots had been absorbed, so that the pivots extended far beyond the apical foramen. This process of absorption must have been going on for a long time, and it was remarkable that it should have gone on to such an extent before any irritation was excited by the presence of the foreign body in the alveolus.

The next case was one which illustrated the danger of giving an anæsthetic and operating single-handed. He was removing two teeth from the mouth of a little girl aged $4\frac{1}{2}$ years. Just as he had extracted the first the gag slipped, and as he was replacing it, the gentleman, who was giving the gas for him, called out that the child

was not breathing. Artificial respiration was at once resorted to, and she soon came round, but he believed that had he been by himself he should have been too much occupied in getting the mouth open and removing the second tooth to notice the sudden stoppage of respiration, and the child would probably have died. He then showed, on behalf of Mr. Read of Holles Street, a right upper central which he had extracted from the mouth of a gentleman aged 25. It had been knocked out with a hockey stick when the patient was a boy at school. After lying out of the mouth for about three hours it was replaced, soon became quite firm, and remained useful for twelve years; signs of irritation then showed themselves and it was extracted. Absorption of the root had taken place to a very considerable extent.

Mr. HENRY MOON related a case of epilepsy cured by the removal of dental irritation, which had occurred in his practice at Guy's Hospital. The patient, a girl aged 21, was brought as an out-patient to Dr. Hilton Fagge, and he finding that her teeth were in a very bad state, sent her to Mr. Moon. She had suffered from fits since she was fourteen, and lately they had become so frequent as to reduce her almost to a condition of imbecility. On examining her mouth Mr. Moon found a third molar in process of eruption; he at once lanced this freely, and an immediate improvement seemed to come over the girl's previously blank expression. Some of the other teeth were extracted and others stopped at the Dental Hospital; treatment by bromide of potassium was ordered at the same time. The result was that the fits entirely ceased from the day of her first visit to the hospital, and her mental condition rapidly improved. She was kept under observation for several months, but no recurrence took place.

Mr. MARCUS DAVIS showed several ingenious appliances which he had found useful in practice, as a rubber dam weight for operations on a lower molar; a small fork for applying and fastening the rubber dam, and a wedge opened by a screw for separating approximal surfaces.

Mr. MORTON SMALE exhibited a model taken from a patient, aged 18, showing an abnormally large lower bicuspid. He also described an automatic saliva ejector, which he had fitted up in his own operating room.

Mr. WALTER COFFIN then read a paper on "Gutta Percha Impressions in Regulating."

His statement, made at the International Medical Congress, that gutta percha was the best impression material for regulating cases occasioned surprise, and had brought upon him a considerable amount of correspondence; he thought, therefore, that a short description of the points in which his mode of working differed from the ordinary procedure might be interesting. As the result of his experience he could state that, besides its intrinsic advantages, gutta percha was the simplest and easiest material to use, the ordinary opinion to the contrary being due either to inferior samples or to improper methods of use which are copied from one text book to another. Thus directions were given to melt it in a pot and take it out in a spoon; to soften it before a fire or over a flame; to boil a lump of it in water till soft, press in a cup and heat the surface in a flame, &c., &c., any of which processes would inevitably ruin the best gutta percha, so far as its fitness for impressions was concerned. So also the use of soap, vaseline, French chalk, &c., was quite superfluous. All that was required was a suitable cup, a good quality of gutta percha, and some hot and cold water.

The cups he used were made of sheet tin, about $\frac{1}{16}$ inch thick, and with cast handles soldered on; the fit need not be exact; it was better to have one too large than too small. It should be everywhere perforated with rather large holes, and care must be taken that it is of such a shape that it can be bitten upon steadily without being liable to slip.

To take an impression, the cup having been fitted—chiefly as to the bite—and a basin of cold water provided, another is lined with a cloth and filled with boiling water. In this gutta percha in tolerably thin sheets is placed and immediately softens; it is then lifted out on a smooth stick or glass rod, and just dipped into cold water for a second. It may then be manipulated with wet fingers and placed in the cup. Becoming thus somewhat chilled, the filled cup is put into the hot water again for half-a-minute, then just dipped into the cold, and placed in the mouth, and the patient is told slowly and steadily to close the jaws upon it. It should be kept in the mouth for a minute and a half or two minutes; it is then carefully released from the bite, quickly removed, and at once placed in a basin of cold water, where it should be left until it is convenient to cast.

As to the material itself, the pink preparation made for many

years by the Gutta Percha Company, when freshly prepared, left nothing to be desired, if only not treated according to the directions sent out by the depôts. A careful analysis showed this to consist of 56·8 per cent. of very finely ground and pure oxide of zinc, and 9 per cent. of vermillion. Its working properties depended, however, on the quality of the gutta percha itself, which varies immensely in the wholesale market. A satisfactory sample is distinguished by the strong smell characteristic of the fresh gum, its great pliability, toughness, and absence of brittleness when cold, and its freedom from stickiness when wet at temperatures below 212° Fahrenheit. After using a few times it becomes more plastic with heat and gives sharper casts ; but with age and much use it rapidly deteriorates.

Mr. Coffin then pointed out the differences between impressions taken with plaster and with gutta percha, the chief being that the latter shrinks in setting, whilst plaster expands slightly ; a plate made from a gutta percha impression will, therefore, fit the mouth very closely, and is consequently more easily kept in place.

In the discussion which ensued Dr. WALKER said he had to thank Mr. Coffin for having given him some instruction in his method of making and applying regulating plates, and he had obtained most satisfactory results in the five or six cases in which he had had an opportunity of using them.

The PRESIDENT and Mr. COLEMAN said they had tried gutta percha for taking impressions, but had abandoned it as unreliable. They should, however, now try it again according to Mr. Coffin's method, since it was undoubtedly much less disagreeable to the patient than plaster.

The discussion was continued by Messrs. F. Weiss, Stocken, and others, after which Mr. Coffin replied, and the President adjourned the meeting.

Odonto-Chirurgical Society.

At the ordinary meeting, held 9th February, 1882, John Smith, Esq., M.D., F.R.C.S.Ed., President, in the Chair, Mr. WATSON introduced the case which he intended to have exhibited at the January sitting. The patient was a man between fifty and sixty years of age, whose nose, upper lip, and anterior portion of jaw as far back as the first pre-molar, with a wedge-shaped portion of the palate process extending as far back as the second molar, had

been destroyed by Lupus. The patient had been operated upon some six times for the removal of the disease, the last time by Dr. Chiene, about seven months ago at the Infirmary, and by this gentleman he was sent to Mr. Watson to see if anything could be done for him in the way of artificial substitutes for nose and jaw. Mr. Watson succeeded, after great difficulty, in closing the gap in the jaw and palate by means of a hard vulcanite plate attached to the only three teeth left in the mouth, and an artificial nose and lip, also of hard vulcanite, fixed to the plate by a special apparatus, the nose and lip being painted as near as possible to the colour of the face. He had been wearing them since December last, with great comfort and decided improvement in his personal appearance, enabling him to eat and speak comfortably, which was an impossibility before, as well as protecting the mucous surfaces of the nasal cavity. One of the difficulties of the case was that the mouth could not be opened except to a very small extent, owing to the contraction of a portion of skin which was brought down from the forehead to fill up part of the cheek destroyed by the disease, this flap of skin having been brought over the left eye, closing it up. This operation was performed by Professor Lister. The only way in which a model of his mouth could be obtained, was to take it in two halves, but owing to the smallness of the space between the two jaws, Mr. Watson was unable even by this method to get an accurate model, and had to manipulate it considerably afterwards to make it anything like correct.

The Secretary, in the absence of the author, then read a paper by Mr. John Laws, L.D.S.I., of Weymouth, entitled "Surgery 'Talk, or Conversations between Patient and Operator," of which the following is an abstract:—

"The art of conversation is one which should be fully cultivated by every practitioner of Dental Surgery. Few have such opportunities afforded them of indulging in it as he; still fewer have the chances of imparting by its means instructions so needful, or that would be so much appreciated by its recipients. Daily compelled, frequently for hours at a stretch, to remain in the company of two or three persons, the operator will find that a pleasant, easy conversation on topics with which he is familiar, but to which his listeners are probably strangers, instead of hindering him, will help him with his work, by enabling him to forget the aching back and the much-strained muscle. Again, few people are brought into contact with such a great variety of temperaments and differences

of character, all requiring different management, yet all necessitating a very large amount of tact and skill on the part of the operator, in order that he may not only perform the particular operation required by each, but, at the same time, impart to each, in a considerate yet conscientious manner, the praise or blame, advice or warning, which is quite as much due to his patient as is the performance of every operation to the fullest measure of his ability. And yet this is an art to which little attention or little thought is given.

"Much aptitude, perseverance, and a well-studied observation of human nature, are required to commence and carry on such conversations as I have indicated. We all know that the address, or tone, or manner best suited to, and most likely to tell with, the patient who comes for half-an-hour's gratuitous service in the early morning, would be very unsuited to the lady who engages our attention later in the day, and is accompanied by her friend or maid; yet both stand equally in need of advice and instruction, which are as much due to them as any other service we may perform. And if we allow 'Mary Jane' to depart from our presence without earnestly giving her the warning or advice (which she may stand so much in need of), because she is a servant, and we have more important matters to think about; or, on the other hand, if we allow the lady to leave our room without having conscientiously given her whatever instruction we can impart to her for the future well-being of her dental organs, because we may fear it is a delicate matter on which to address her, and might give offence—then in neither case have we more than half performed our duty, or honestly fulfilled the charge committed to our trust as Dental Surgeons.

"Our work, however cleverly or scientifically performed, is only half done if we do not follow it up with earnest words to each of our patients in regard to that work, giving them the why and the wherefore of the necessity for the special operation performed, and explaining most fully what is their duty in regard to caring for and endeavouring to protect the work in the future; for I think you will agree with me in saying that the result as to permanence of a large proportion of our operations depends nearly as much upon the patient as the operator. No matter how good a filling may be, or how cleverly and perfectly it has been inserted, the chances are that the time, and thought, and care, and labour,

and money that have been expended upon it will be utterly thrown away unless we have taken the pains to teach our patient to take care of it." Mr. Laws then sketched out some imaginary conversations, illustrating the style he considered suitable for different classes of patients.

"If we fully realise the responsibility laid upon us as Dental Surgeons, we shall not be slow to recognise the benefits that must result from judicious conversations with our numerous patients. We pay too much attention to remedial measures, and too little to preventive ones; our very best means of drawing attention to the latter is by our 'Surgery Talk;' it is a most powerful lever which has been placed in our hands; to over-estimate its importance is impossible. Let us endeavour, then, by our conversations, to show up this matter in its true light, and strive to bring about a better and more natural—hence more healthful—state of things; for as the power of speech, that Divine gift, which an all-wise Creator has bestowed solely upon mankind, raises him immeasurably above any other living animal, the responsibility devolves upon us of taking every opportunity of using it for the advantage and well-being of our fellow men; and, as Dental Surgeons, opportunities are thrown in our way which few possess, of educating our race to the necessity of paying strict attention to the natural laws of health, enforcing specially upon their minds that portion of the subject which belongs more particularly to us, and which, to my mind, is as important as any other, for I have little hesitation in saying that the deterioration of our teeth at the present rate means eventually the degeneracy of our race. Let no dentist, then, consider himself proficient in his calling or equal to the efficient performance of his duty to his patients, until he shall have studied and mastered this art of conversation, so that the drift of our 'Surgery Talk' shall be to elevate the minds of our fellow creatures, and not only enable them to appreciate our work, and strive to take proper care of it, but to endeavour in their families, by due attention to the simple laws of Hygiene, to bring about a state of things through which their offspring shall at least not be worse off in their dental organization than they are themselves."

Mr. BIGGS said: That a vast number of patients injure their teeth and health through ignorance, there can be little doubt; and that the education of their patients on such subjects must in the

meantime, to a great extent, devolve upon the dentist. But it is a difficult matter to do two things at once, and do them well; and, for my part, I prefer to say whatever I consider of importance first, and then give the operation my undivided attention.

Messrs. MACGREGOR, FINLAYSON, and WILSON having also expressed their opinions,

The SECRETARY, on behalf of Mr. Laws, thanked the Society for the favourable reception they had given to his paper. Although he did not speak with the authority of Mr. Laws, he thought he would not be misrepresenting the author when he asked the Society to accept the illustrations not in their literal sense, but as typical of the form, or at least direction, into which we should endeavour to lead our surgery conversation.

Mr. WILSON exhibited models of the upper jaws of two ladies (sisters), in both of whom the lateral incisors were suppressed. In these the temporary series was quite normal. As showing the hereditary tendency of this suppression, he had been informed that the same thing was seen in a third sister, and also in their father and one of his sisters. He also showed the model of an upper jaw, in which the *second* bicuspid were much smaller than the *first*. This abnormality seemed very uncommon, as he had only met with one other case.

Mr. WATSON showed two interesting specimens of replanted teeth. No. 1 was replanted February, 1874, in the mouth of a boy aged seven years at that time. The patient was attacked by measles a few days after the operation, yet the tooth did very well, and was quite firm in little more than a month. He extracted the tooth last September, more to see what condition it was in than anything else, as the tooth was comparatively firm, and might have lasted two or three years longer. It had thus been replanted about seven years. Upon making a microscopic examination of the tooth he discovered numerous excavations (*Howship's lacunæ*) produced by the multiform osteoclast cells derived from degeneration of the cellular elements of the periosteum. Of the other cases shown along with this one in 1874, some had failed, and others had been lost sight of through the patients removing to other parts of the country. No. 2 was replanted May, 1880, and had got so loose last September that the boy pulled it out himself with his fingers. The dentine and cementum of the roots in this case also had numerous excavations on them caused

by the absorption cells. The experience he had had of replantation led him to think that this operation will only be useful in exceptional cases, as the roots of the tooth are sure to be destroyed sooner or later by the destructive action of the osteoclast cells.

The CHAIRMAN remarked that the subject of replantation or transplantation of teeth was one beset with many difficulties in determining its value as a surgical operation. It had been revived from time to time for the last hundred years, but had never seemed to maintain its ground as a reliable mode of treatment. Cases might appear successful for months after their performance, but within a few years the majority turned out to be unsatisfactory. But, from his own experience—and he had devoted some attention to the subject between twenty and thirty years ago, as well as much later—he had not much confidence in it.

Mr. MACLEOD said that, personally, he was much indebted to Mr. Watson for bringing these cases before the meeting, as they were a confirmation of the opinion expressed by himself when Mr. Watson previously exhibited these and other cases in the mouth as successful results of replantation. At that time Mr. Watson was not inclined to entertain the idea of the possibility of failure, as the operations had been conducted with care, under strict antiseptic surroundings. But now, finding his then convictions overturned by facts which could be seen and handled, he brought his failures before his fellow associates, and honestly avowed his conversion. The opinions which he (Mr. M.) then held, and which were based upon personal experience and experimentation, and recorded in their Transactions, were—1st, That replantation of a tooth which had been the subject of alveolar abscess was never permanent; 2nd, that even where successful for a few years, the game was not worth the candle; and 3rd, that although replantation might occasionally be indulged in as a temporary expedient, it would never take its place as a recognised operation in dental surgery. Cases which had been published between that date (1874) and this had only tended to strengthen these opinions, and as these recorded cases had been operations by men of undoubted knowledge and skill, no room was left to gainsay the unsatisfactory nature of replantation.

The CHAIRMAN then intimated that the Annual Meeting would be held on March 13th, at 2 p.m., when an interesting paper on "Abnormal Dentition in the Horse," would be read by Principal Williams, F.R.S.E., of Edinburgh New Veterinary College.

Annual General Meeting.

THE Annual General Meeting of the Society was held according to notice at the Edinburgh Dental Hospital, in Chambers Street, Edinburgh, on the 13th inst., Dr. John Smith, President, in the chair.

The Secretary (Mr. W. B. Macleod) and Treasurer (Mr. Finlayson) having read their reports, the following list of office-bearers for the ensuing year was unanimously adopted :—

President—J. Smith, M.D., F.R.C.S.Ed.

Vice-Presidents—A. Wilson, L.D.S.Ed., and Joseph Walker, M.D., L.D.S.Eng., London.

Treasurer—Matthew Finlayson.

Secretary—W. Bowman Macleod, L.D.S.Ed.

Curator and Librarian—G. W. Watson, L.D.S.Ed.

Council—Walter Campbell, L.D.S.Eng., Dundee; Leon J. Platt, L.D.S.Ed., Stirling; Malcolm MacGregor, L.D.S.Ed.; Austin Biggs, Glasgow.

Principal Williams, F.R.S.E., then read a paper on “Abnormal Dentition in the Horse and other Animals,” which we hope to publish in our next issue.

The meeting next proceeded to the consideration of the questions regarding the Dental Curriculum which are now before the General Medical Council. After a full discussion, opened by the President and continued by a number of the members, the following resolution, proposed by Mr. Macleod and seconded by Mr. Campbell, of Dundee, was unanimously adopted :— “That although the Society is of opinion that the three years’ mechanical training is, and must always be, an essential part of the professional training of the dental surgeon, it does not consider it necessary that the dental student should be compelled to pass the preliminary examination in Arts until prior to beginning his hospital and surgical studies.”

Some alterations in the bye-laws having been agreed to, and other formal business transacted, the proceedings terminated.

Annual Dinner of the Scotch Dental Licentiates and Members of the Odonto-Chirurgical Society.

THIS annual gathering took place at the Balmoral Hotel, Edinburgh, on the evening of Monday, the 13th inst. Mr. Andrew

Wilson, L.D.S., of Edinburgh, occupied the chair, and Mr. W. B. Macleod, L.D.S., Hon. Sec. of the Society, was croupier. Amongst the guests were Dr. Peddie, Vice-President of the College of Physicians of Edinburgh, Dr. Littlejohn, Dr. Hunter Mackenzie, Dr. Croom, and Principal Williams, F.R.S.E.; whilst of the members there were present Dr. Walker, of London; Mr Warwick Hele, of Carlisle; Dr. W. Williamson and Mr. P. Crombie, of Aberdeen; Messrs. Rees Price and Austin Biggs, of Glasgow; Messrs. Walter Campbell and Syme, of Dundee; Dr. Smith, Dr. Reid, and Messrs. McGregor, Finlayson, Matthew, &c., of Edinburgh.

After dinner, the usual loyal introductory toasts having been proposed by the Chairman and cordially responded to, Dr. Peddie proposed the toast of "The Licentiates in Dental Surgery." In doing so he said the toast implied not merely their best wishes for the individual prosperity of these licentiates, but also an expression of the high estimation in which they held recent improvements whereby the science and art of Dentistry had been elevated, public welfare promoted, and the dental practitioner placed in a better status in society through legalised qualifications and registration. He then referred to the gradual improvement which had taken place in all departments of Dental Surgery; excellent arrangements had been made for preliminary and professional instruction and the manner in which the examination for the diploma was carried out was worthy of all praise. A great deal of abuse had been heaped on the colleges by some of the medical journals, from which better things might have been expected, but he had no doubt those present would agree with him in declaring that the allegations thus made were entirely without foundation. The speech and toast was received with much applause. Dr. Reid suitably replied, giving a history of their doings during the last forty years, and claimed that the Edinburgh school was second to none as respected the quality of the instruction given.

Amongst the other toasts were "The Odonto-Chirurgical Society," proposed by Dr. Littlejohn, of Edinburgh, and replied to by the President; "The Odontological and other Sister Societies," by Dr. Smith, replied for by Dr. Walker; "The Licensing Bodies," proposed by Mr. Walter Campbell, and responded to by Dr. Littlejohn; "The Edinburgh Dental Hospital and School," by Dr. Wormald, replied for by the Dean.

We regret that the, for us, very inconvenient date on which the meeting was held—just as we were going to press—compels us to give so brief and hasty an account of the proceedings.

The Dental Hospital of London.

THE annual meeting of this Institution was held at the Hospital, Leicester Square, on the 9th inst., under the presidency of Sir Charles McGrigor, Bart., one of the Trustees. In the report, which was unanimously adopted, the managing committee were enabled to speak satisfactorily of the progress of the Institution, as regards the funds, which showed a considerable increase in the income compared with that of last year, which they thought was in a great measure due to the fact that the general public are gradually becoming aware of the great necessity for dental hospitals, and are more disposed to support them, and also to the great benefits which the Hospital continues to afford the suffering poor, 30,799 cases having been treated during the year 1881. The committee thought it a fit subject for congratulation that, for the first time in the history of International Medical Congresses, a section was accorded to Dental Surgery in the Congress of last year. But with this prominent honour came corresponding responsibilities, and they could not too strongly impress upon the governors and the public that if our country is to retain its position, the educational facilities of this Hospital must be largely increased, and that, owing chiefly to the costly nature of the materials, this could only be done by a large expenditure of money. The Hospital was unendowed, and increased funds would enable it greatly to extend its usefulness.

The Metropolitan Counties Branch of the British Medical Association.

A LARGELY attended meeting of the members of this Branch was held at St. George's Hall on the 22nd ult., Mr. EDWIN SAUNDERS, President of the Branch, in the chair. Amongst those present were many representatives of the Dental profession. The chief business of the meeting was a description by Dr. HOWARD of his ingenious ambulance waggon, which was placed on a stage in full view of the audience.

The PRESIDENT opened the proceedings with a short address as follows :—

"Gentlemen, I trust I may regard this well-filled hall as a proof that I did not misinterpret the wishes of that large and important branch of the British Medical Association over which, at this time, I have the honour to preside. I felt sure that whatever had for its object the improvement of arrangements and appliances for mitigating human suffering and augmenting the chances of success in the treatment of disease, would receive a candid and cordial reception at your hands. For although doubtless we are not free from that self-love and approbation of one's own proceedings which, under various modifications, will be found to characterise all persons and all nationalities, yet I think it will not be disputed that Englishmen are not slow to acknowledge their own shortcomings or to adopt improvements which commend themselves to their judgment. For example, in the matter of transport and the immediate treatment of the sick and wounded in our midst, it does seem strange that, with hospital arrangements which, with few exceptions, leave little to be desired, with medical and surgical treatment dispensed not only in accordance with the most recent discoveries and most advanced lights of science, but with all the tender care of an enlightened humanity, the means for placing all this within the range of those for whom it is intended, should be found wanting. The healing water is there, and it has been duly energised by the descending angel, but alas! for the poor sufferer, there is no one by to put him in. It is surely no reflection on the police, patient, forbearing and considerate as for the most part they are in their ministrations, that their services in this respect are not entirely, and at all times, satisfactory. With the knowledge they possess and with the means at their command, they do all, and more than all, that might reasonably be expected of them. And who shall say to what extent the public are indebted to their good offices for the prevention of accidents, by their cool and admirable management of the vehicular traffic in our crowded thoroughfares, and by their courteous and patient care of the foot passengers? It would indeed be difficult to estimate the value of the services thus rendered by the force in the diminution of casualties. But, notwithstanding all this care and all possible precautions, accidents, it is well known, are of daily occurrence, many of them of a grave character, for which I think it will be admitted that our present arrangements are not quite what a high civilization might naturally be expected to provide.

The rudimentary police-stretcher and the common street cab, though occasionally useful, can hardly be regarded as being in harmony with modern social arrangements for the conveyance of a patient with a fractured limb or in the agonies of an unreduced dislocation. To supply this want, and so far to provide a remedy for this defective state of things, has been the aim of Dr. Howard, the inventor of the very complete and serviceable apparatus before us, the product of much close and serious thought, both as regards its medical and mechanical capabilities. I will now ask Dr. Howard to favour us with an exposition of its peculiarities, so that we may be in a position to judge to what extent it fulfils the required conditions, and in what way it may best be utilised in the service of the public."

Dr. HOWARD then explained his apparatus, which was afterwards examined and criticised by some of the distinguished authorities who were present. The meeting was both highly successful and exceedingly interesting, but we must refer those who wish for a fuller account of the proceedings to the *British Medical Journal* of the 4th inst.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Profuse Hæmorrhage from a small Epulis.

THE following case occurred in the practice of Mr. Hulke at the Middlesex Hospital, and is published in the *Lancet* of March 4th. In explanation of its exceptional features, it must be remembered that the term "epulis" is used to designate all growths springing from the gums, without reference to their microscopic character. Most frequently they are simple fibroid excrescences, but occasionally they exhibit the structure characteristic of the more malignant vascular sarcomata; and although its growth was somewhat slow, it seems probable that the case here recorded was one of these, in this situation, somewhat rare forms of tumour:—

"A little blonde machinist, aged sixteen, with wax-like pallor, and scarcely able to stand without support, was admitted into Queen's ward on the night of July 29th, 1880, on account of very profuse hæmorrhages from the mouth. Their source was a small epulis of the size of a Spanish nut, springing from the interior

plate of the alveolar process opposite the right first molar tooth. The girl said that this had begun to grow three years before, soon after she had had an upper double tooth removed at the Dental Hospital. Until this uncontrollable bleeding, which obliged her to come to the hospital, she had not attached any importance to the lump, particularly as it occasioned her but little inconvenience. This molar was drawn, the epulis cut away, and the bone to which it was attached was gouged out. Bleeding, which was somewhat copious, was checked by a compress dusted with powdered persulphate of iron. The wound healed in about a fortnight, by which time she had begun to lose her pallor. A few months since there was no appearance of a recurrence. The anatomical structure of the tumour placed it in the class of fibro-sarcoma."

Proposed Academy of Medicine of Ireland.

THE *Medical Press and Circular* published, some weeks ago, some account of a proposition which was engaging the attention of the Dublin Pathological Society for amalgamating the four societies in Dublin, which now represent Medicine, Surgery, Pathology, and Obstetrics. This proposal has now assumed the form of a draft scheme, which has been worked out by a sub-committee and submitted for consideration to the four societies whose co-operation is desired. The name of the new society is to be "The Academy of Medicine in Ireland." It will consist of four sections, corresponding to the four societies now existing. All members of the existing Societies, and all Fellows of the Colleges of Physicians and Surgeons, are to be members of the Academy without ballot. All other candidates for membership are to be ballotted for by the General Council.

The communications to be submitted to the ordinary meetings are to be grouped under the following heads:—Medical, Surgical, Pathological, and Obstetrical; and the conduct of such meetings is to be in the hands of the several Sectional Councils, each Sectional Council to have the management of the ordinary meetings in regular rotation. The Council of the Pathological Section to have charge of the first in each Session; that of the Surgical of the second; that of the Medical of the third; and that of the Obstetrical of the fourth; and so on until the end of the Session.

We should be very pleased to see a Dental Section included in

the departments of the projected Academy. Dublin possesses no Dental Society, and the opportunity seems now to present itself, not only for starting one, but of amalgamating it at once with the general medical body. The dental profession in Ireland has ample professional and personal claims to reception into the Academy, and we trust that our dental brethren will bestir themselves to promote the object to which we refer, and of which the importance must be fully recognised.

The Anthropometric Laboratory.

A VERY suggestive paper with the above heading is contributed by Mr. Francis Galton, F.R.S., to the *Fortnightly Review* for March. In it he points out that our scientific knowledge already renders it possible to define and forecast with considerable accuracy the physical and mental capacities of individuals; that by means of certain measurements of the bodily form and faculties, it can be demonstrated with some precision what a man is fit for, and in what direction he may shape his life's work with least risk of disappointment. Mr. Galton concludes by suggesting the establishment of "Medico-metric Laboratories," at which certificates of observed facts should be furnished to any applicant for stated fees. These would contain as exact a report of the physiological status of a person as is possible in the present state of science, with the help of microscopic and chemical tests and physiological apparatus. Mr. Galton points out that these certificates would be of the greatest possible service to practising physicians, since it could be made the basis of a valuable life history of the individual, the physician adding his own observations of his patient's successive illnesses. The writer admits that it would be contrary to the inclinations of most people to take trouble of this kind, but he points out several advantages which would result from the practice, such as their biographical interest to the person himself, his family, and descendants; their utility to himself in after life; the information they might give of hereditary dangers and vital probabilities to his descendants. They would, of course, also be of the greatest value as materials for future investigations into vital statistics. For instance, the question whether the tendency to dental degeneration and disease is really increasing can never be satisfactorily answered until an extensive series of accurate obser-

ventions has been recorded, and this article plainly indicates the right method to be pursued in the enquiry. We commend it to our readers for careful perusal.

The Dental Engine in General Surgery.

SOME of our readers may remember that Dr. G. A. Bonwill exhibited in the Surgical Section of the International Medical Congress a Dental Engine adapted for general surgical purposes. We understood that at the close of the Congress the machine was presented to St. Bartholomew's Hospital, but we have not heard that it has been used.

In America, however, its advantages seem to be obtaining some recognition. The *Medical and Surgical Reporter* gives notes of three cases in which it was used at the Long Island College Hospital. One was a case of depressed fracture of the skull; a button of bone was removed with a trephine attached to the engine "in a few seconds," without the slightest injury to the dura mater. The depressed fragment was then elevated, but the patient unfortunately died from the severity of the injuries received. In another case the engine was used to clear out some extensive caries situated in the cancellous portion of the head of the tibia. This it did most efficiently, and the patient made a good recovery.

The Dental Engine has been most successfully used both in this country and in America for the removal of bony exostoses from the auditory meatus. But there are evidently many other purposes to which it might be applied. Some of these were indicated by Dr. Bonwill in his short paper, which will be found at p. 475 of the second volume of the "Transactions" of the Congress.

The Transactions of the International Medical Congress.

BESIDES the paper by Dr. Bonwill referred to above, which appears in Vol. 2 of the "Transactions," a good deal of matter interesting to the dental profession will be found in the Section of Diseases of Children, contained in Vol. 4. Part of this—*i.e.*, Dr. Magitôt's paper on "Erosion" and the discussion thereon—has already been noticed in this Journal, but there are two other papers dealing so largely with dental malformations that they

would have been better discussed in Section XII. than in that in which they were read. These are Professor Parrot's paper on "Rickets and Hereditary Syphilis," and that of Dr. Bouchut on "Syphilis as a cause of Rickets and of Malformation of the Teeth." The aim of the first is to prove that "hereditary syphilis is the sole cause of rickets;" and as regards the teeth, not only Hutchinson's notch (which M. Parrot says is due to wearing away of the central part of the cutting edge of the incisor, consequent on defective enamel), but also honey-combing of the teeth, and apparently all other defects of the enamel, are due to syphilis!

Dr. Bouchut thinks that rickets is a general state of malnutrition, which may be induced by syphilis, but may also be due to many other causes; and similarly that malformation of the permanent incisors *may* be due to syphilis, not from any specific influence, but only as the result of the cachectic state, and that the same effect may be produced by rickets, chronic enteritis, or prolonged suppuration. He, however, accuses Mr. Hutchinson of stating that honey-combing is due to syphilis, and was evidently as ignorant as M. Parrot of the real nature of the Hutchinson notch. We need hardly add that in the discussion which followed, M. Parrot's extraordinary views were strongly controverted.

Deaths from Anæsthetics.

THE occurrence, in rapid succession, of six deaths from chloroform since the beginning of the present year, has again revived the "Ether *v.* Chloroform" controversy in the pages of the *British Medical Journal*. Dr. Ernest Jacob states that, during last year, nine deaths from chloroform and four from ether were recorded in the British Isles. But, as is pointed out by other correspondents, these figures give no information as to the relative safety of the two agents, unless the total number of cases in which each has been administered can also be stated. If, as is probable, chloroform is still used twice as often as ether, the relative mortality from each would be about equal.

The correspondence is carried on in the usual uncompromising style. One gentleman says he has administered ether to patients of all ages—from infancy to over eighty years of age—with the happiest results, and he thinks that the day will soon arrive when the occurrence of a death from chloroform will render those concerned liable to a criminal prosecution. Another says his expe

rience of ether has been very unsatisfactory—it had in several instances caused faintness, vomiting, &c., and in two cases a fatal result was only just averted—and that, after ten years' experience of chloroform, he considers that, if carefully and properly administered, it is as safe an anæsthetic as we possess. A third points out that in three of the deaths from ether reported last year, the patients had been in good general health, yet died suddenly during the administration, and holds that with a due exercise of skill and caution, chloroform is almost absolutely free from danger. Evidently the question must still be considered, to a great extent, *sub judice*. It can only be decided by the collection, on a large scale, of particulars of all cases in which anæsthetics have been used, and a careful tabulation of the resulting figures.

Stretching the Facial Nerve.

In the recently published volume of Transactions of the Clinical Society for the year 1881, will be found a full report of the very interesting case of stretching of the facial nerve for the relief of obstinate spasm of the facial muscles, which was brought before the Society last spring by Dr. Sturge and Mr. Rickman Godlee. The patient was a lady, aged 72, who had suffered for six years from constant twitching of the muscles of the face. She suffered no pain, but the spasms were so violent as greatly to disturb her sleep. She had consulted many physicians, and tried all sorts of treatment without the least benefit. Mr. Godlee cut down upon the nerve on the right side—the side on which the spasms appeared to originate—near its exit from the stylo-mastoid foramen, and stretched it forcibly several times. Paralysis of the right side of the face followed, and continued for several weeks; but up to May, 1881—the operation having been performed in July, 1880—the patient continued free from her annoyance, though at one time she had a threatening of a relapse, occasioned, apparently, by a derangement of her general health.

A Contribution from "The Lancet."

We are always pleased to give increased publicity to the contributions which *The Lancet*, at rare intervals, offers for the advancement of Dental Surgery. For if they cannot be said to afford anything especially valuable in the way of instruction, they, at

least, never fail to be amusing. The extract given below from *The Lancet* of March 11th is no exception to this rule. The soap and water treatment is, however, certainly a hint in the right direction.

TOOTHACHE.

To the Editor of THE LANCET.

SIR,—For the relief of common toothache I recommend and use with benefit a toothbrush (one with bristles, some long and some short preferable) well charged with common yellow soap, and with this and water (cold or tepid) to thoroughly cleanse the teeth and mouth. Then, if requisite, to smoke a brown paper cigar, retaining the smoke, which contains, I believe, creasote in vapour, in the mouth for half a minute, or as long as convenient. A few drops of oil of juniper with tincture of opium on lint are good after cleansing—for more permanent relief a few minims of tincture of gelseminum with ammonia and alkaline bicarbonates. I am of opinion that the pain in hollow teeth is often caused by some living thing in partially putrid food lodged in the tooth, and that therefore a cleansing with soap and water should be the first step.

I am, Sir, your obedient servant,

P.S.—I have given small doses of bromide of potassium and tincture of hyoscyamus with benefit.

Formation of Pigment by Bacteria.

WE are not aware that any explanation has ever been offered with regard to the pigmentation of decomposing dentine, which so often accompanies the progress of caries. The following excerpt from a valuable work recently published, "Cheyne's Antiseptic Surgery," which we purpose shortly to review in this Journal, furnishes a reasonable explanation of the phenomenon, and we commend it to the study of those who are engaged investigating caries, especially in regard to the facts and theories which have lately been so ably propounded by Messrs. Arthur Underwood and Milles. Mr. Cheyne's summary of the facts bearing upon the formation of pigment by bacteria, is as follows:—

"Striking facts as to the association of a definite chemical change with the presence of organisms of a definite form were brought forward by Cohn and Schroeter with regard to "pigment bacteria."*

They showed that while many forms of organisms could grow on such soil as boiled potatoes, yet a definite pigment was produced only when one particular form was present. These organisms generally

* Beiträge zur Biologie der Pflanzen.

belonged to the group of "micrococci," though sometimes pigmentation was caused by bacteria, as in blue pus. These pigments were sometimes scarlet, sometimes blue, sometimes soluble, sometimes insoluble; and when a variety of soils were inoculated from an individual specimen, the same colour, with the same chemical and other characteristics and the same organism, always resulted. Not only might these pigment bacteria grow on boiled potatoes, they could flourish on cheese, meat, white of egg, bread, starch, &c., the same pigment being invariably produced. The conditions under which this pigment appeared were exactly those which were most favourable to the life of the organisms, while those in which it was absent were those in which the organisms would not develop.

"Schroeter concludes from his investigations that these examples show that a manifold series of pigments may be produced "by bacteria and bacteridia." He adds that the organisms which form them can often be recognised as distinct owing to the difference in the pigment produced; the organisms which form the various pigments being often also distinctly separable by different morphological characters, and the different pigments behaving differently with reference to chemical reagents. He considers that it is not unjustifiable to hold that each separate pigment is formed by a distinct specific organism. He points out that the pigments are definite chemical substances formed by the bacteria from organic, albuminous materials, and that the process is therefore quite analogous to the formation of alcohol by the yeast plant or of lactic acid by other bacteria.

"Cohn further found that these same organisms developed readily and produced the same pigment in *artificial cultivating fluids containing ammonia and a carbonate, but no trace of albumen*. Once obtained in this fluid they could be propagated indefinitely, the same pigment being constantly produced. In this instance we have an example of a definite change brought about by the growth of a definite form of organism. No *spontaneous* change ever occurs in Cohn's artificial fluids resulting in the formation of these pigments, and yet as soon as these organisms, which are associated with definite pigments when growing on albuminous soil, are introduced into these mineral solutions, the same pigments appear. That in the latter case the pigment is formed by the bacteria is evident, for it is a complex organic substance, closely related to the aniline colours, and yet in this instance it is derived from a few inorganic salts. It is therefore a substance formed by the living plants, and, as before remarked, there is nothing remarkable in this production of pigment by living cells. It is only what is constantly occurring in many animal and vegetable cells, and in the latter it is formed from inorganic compounds. Indeed it would be against all chemical experience that by any purely chemical process a complex organic compound would be so readily built up from a few inorganic compounds of

a very simple kind. These facts absolutely prove that the pigment fermentation was the result of the *life* of the organism, for the pigment must have been built up by it and could not have originated from chemical changes propagated to the fluid."

Zeal without Discretion.

THE name of Dr. Frank Comer must be added to the long list of those who may well pray to be delivered from their friends. It may be presumed from the subjoined extract, dated January 18th, 1882, that Dr. Frank Comer, "American Dentist," of Torquay, has a friend on the staff of *The Torquay Directory and South Devon Journal*, to whom he has shown the water motor Burring Engine, recently introduced at some of our London Dental Depôts. The literary friend with unhappy zeal has forthwith written the editorial article to which we draw attention, and not contented with speaking of the question of water as a motor power in more or less general terms, must needs bring in Dr. Comer's professional qualification and the address of his residence. We can well understand the extreme annoyance this would cause to a sensitive minded and retiring man, but it is evidently a matter in which Dr. Comer was powerless to do anything, though we can imagine his saying and thinking a good deal.

As if to add a sting to the vexatious paragraph, the public are informed that Dr. Comer positively had to go to the expense of laying down a special main for 1,300 feet, in order to obtain the desired pressure. It was quite bad enough to have to do this merely to work a dental engine, but for everybody to be told about it seems too irritating.

"When, in 1854, it was proposed to supply Torquay with water from one of the Dartmoor streams, one of the advantages promised was that from the great elevation of the source of supply from the sea level, we should be able to have a fountain on the Strand which would equal those at Sydenham. We have not attained that yet, nor do we suppose the town would care to run the risk, as in all probability the enormous pressure direct from the storage reservoir at Hennock, between seven and eight hundred feet above the level of the sea, would destroy the mains. It was also considered that the water might be used as a motor in various mechanical appliances. This notion, however, has not been realised to any great extent, because Torquay has so rapidly grown as to need nearly all that the storage that Hennock can supply. Possibly, when the additional reservoir now in course of construction is completed, water power will be freely used. At present

water power is utilized for lifting the sewage of the low level district around Torre Abbey into the higher level intercepting sewer at the pumping house in Swan Street; and the organ at Upton Church is worked by a hydraulic engine. But, perhaps, the most ingenious appliance of all is that to be seen at the residence of Dr. Frank Comer, American dentist, at Devon, Park Hill. Most dentists have an apparatus, worked by a treadle, for removing any decay from cavities in the teeth, preparatory to stopping them. Dr. Comer's is driven by water, for which purpose a special main has been laid from Meadford Cross to the house, a distance of over 1,300 feet, in order to secure the desired pressure. The instrument and its appliances are exceedingly ingenious, and the drill by which the decay is removed makes 3,500 revolutions per minute. The advantage of this arrangement is this, that instead of the attention of the operator being divided between his patient and working the treadle, he can devote his entire attention to the application of the instrument to the teeth. There is no doubt that when a constant water supply is assured, it will be made use of for a variety of mechanical purposes."

OBITUARY.

Dr. M. S. Dean, of Chicago.

DIED JANUARY 28TH, AGED 57.

FEW of those who attended the meetings of our section at the Congress will have read without emotion that Dr. Dean has passed away. To him was given that rare gift, the power of an open, loveable nature to make a fast friend quickly, and none could meet him without feeling the influence of this charm. Full of humour, keen of discernment, and strong of purpose, he was yet so gentle that it may be doubted if anyone ever heard an unkind word fall from his lips. Amongst his professional brethren he occupied a somewhat unique position; liked, trusted, and respected by everyone, his thoughtful opinion was oftentimes enough to determine the fate of a moot question. He had filled every office of honour in the State and National Dental Association, and had contributed much that is valuable to the literature of our profession, his papers being distinguished from the ordinary run of dental literature by the thought bestowed upon them, and the care evinced in the working up of his subject, of which he was a true and earnest student. Within the last few years he had translated the work of MM. Legros and Magitôt upon the Dental Follicle,

annotating it, and adding to it much that is valuable. For some time he had been suffering from heart disease, and realised the uncertainty of his life, even telling some of his friends in England that he sometimes went to bed picturing to himself how they would call him in the morning and none would answer. And as he had pictured it, so it fell out. After receiving his patients during the day, he spent the evening with some friends, being then in his usual health and spirits, and left them to sleep peacefully into death.

NEW INVENTIONS.

Howarth's Combination Flask and Clamp.

WE have received from Mr. Howarth, L.D.S.Eng., of Bradford, and carefully tried, a very ingenious flask binder invented by him. A powerful helical spring, being compressed by a nut and screw, is released upon the flask, and exerts a continuous pressure to close it gradually as the rubber or celluloid softens in heating up, or on the vulcaniser itself. It would seem to attain simply and inexpensively the objects of the more elaborate screw press vulcanisers. It is neatly and strongly made, though if slightly larger, ordinary flasks would be accommodated more conveniently. Mr. Howarth, however, supplies a special and very compact three part flask, which he will doubtless improve by provision for firmer attachment of the plug to the top, and also by some means of escape for excess of investing plaster.

Appointment.

MR. S. J. HUTCHINSON, M.R.C.S. and L.D.S. Eng., has been appointed Dental Surgeon to the Dental Hospital of London, *vice* Mr. Alfred Coleman, F.R.C.S. and L.D.S. Eng., resigned.

Annotations.

IN the last number of this Journal we stated that after March 6th no one would be eligible as a candidate for the membership of the Odontological Society unless he possessed a diploma approved by the Council of the Society. This was in accordance with the

generally received interpretation of the bye-law which was adopted by the Society in April last, and was sanctioned by no less an authority than the ex-president in his valedictory address. We learn, however, that at a recent meeting of the Council it was decided after some discussion that, according to the wording of the rule, the ineligibility was determined by the date of application, and not by the date of election, and that therefore the full period of grace named in the bye-law must be allowed, and applications from undiplomaed candidates will be received up to the date named therein, viz., November 1st.

Just before going to press we received a copy of the Annual Report of the National Dental Hospital for the year 1881. From it we learn that whilst there has been a slight falling off in the subscriptions, there has been an increase of about 2,000 in the number of patients treated during the year. A considerable sum was spent in enlarging and improving the hospital, and, in consequence of the increase in the number of operations performed, it has been found necessary to appoint an Assistant House-Surgeon. We are sorry to learn that the concert given last May at St. James' Hall in aid of the funds of the hospital only produced a nett profit of £9 7s. 3d.

THERE has recently been under treatment at the Dental Department of St. Bartholomew's Hospital, a patient—male adult—who had received the following injuries, said to have been caused by a policeman's truncheon: viz., comminuted fracture of the outer wall of the orbit, fractures of the malar bone and of the zygomatic process, and fracture of the lower jaw just below the left condyle. In addition to the above he had ptosis of the left eye-lid and loss of power in the *erectus externus* muscle of that side.

M. GALIPPE, who has been deputed by the French Government to visit this country for the purpose of reporting upon our system of dental education, has, since his arrival, been actively employed in prosecuting his inquiries. He has spent several mornings at the Dental Hospitals, carefully noting all the arrangements, and obtaining information from the staff. We hope we may hereafter have the pleasure of reading his report, which should be as interesting to us as it will no doubt be to those by whom he has been sent.

BEESWAX, it is well known, is not unfrequently adulterated in such a manner as to render it quite unfitted for many of the purposes to which it is applied in the dental laboratory. According to Herr Peltz, a ready method of testing its purity is to boil a portion in a solution of one part caustic potash with three parts of 90 per cent. alcohol; the vessel should be kept for half an hour in boiling water. If the wax is pure, the solution will be clear, but paraffin and ceresine, the most common adulterents, will float on the top as an oily layer.

OUR excellent and valued contemporary, the *Dental Cosmos*, gives in its January number the following salutary hints to intending contributors: "We want, however, the kernel without the shell; only that which is of practical value to the dentist wherever located." This sentiment we applaud to the echo, but after laboriously plodding through its first twelve pages in search of a missing kernel, we were thrown into a state of irritation by reading in a foot-note that the paper in question had been re-written and—enlarged!

THE report of the Dental Hospital of London for February gives the following figures: Extractions, 1,426, including 446 children and 355 under nitrous oxide; 155 gold, and 519 other stoppings; 65 cases of irregularity treated mechanically, and 417 miscellaneous and advice cases, making in all 2,717 cases.

THE report of the National Dental Hospital for the same month gives the number of extractions as 895—308 being from children, and 79 under gas. There were 52 gold and 328 other stoppings, 47 cases of irregularities, and 302 advice and miscellaneous cases—in all, 1624.

WE are glad to see that the *Sanitary Record*, which has lately published a valuable series of reports on the various appliances exhibited at the Smoke Abatement Exhibition, South Kensington, speaks highly of the merits of Mr. Verrier's "Comet" grate, which, it says, "merits the attention of all sanitarians."

Correspondence.

We do not hold ourselves responsible for the views expressed by our Correspondents.

"Singular Accident with Nitrous Oxide Gas."

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Under the above heading, Mr. Graham Young, in the last issue of your journal, records a somewhat unusual accident to himself, and desires to know if any of your readers have had at any time a similar experience. I, therefore, recount an almost identical accident which occurred to one of my assistants not so long ago. Perceiving whilst I was administering the gas, that there was a slight escape from the union-joint, he thoughtlessly attempted with his fingers to screw the union tighter, but was unable to do so. At the time he felt nothing beyond a feeling of coldness, but very shortly afterwards he discovered to his surprise that his fingers were very badly blistered, and his hand felt, to use his own words, as if he had thrust it into a fierce fire. The usual remedies and treatment for burns were adopted, and in two or three days his hand was all right again. Unlike Mr. Young he did not suffer from nausea or faintness.

I am, Sir,

Yours, &c.,

L. D. S. GLAS.

The Odontological Society.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Many members of the Odontological Society will be pleased to see that your correspondents are beginning to suggest subjects for discussion at the meetings of the above named Society. There are numerous practical matters which would bear periodically ventilating with advantage, both to the Society and the profession in general. As one out of many, I would suggest "Amalgams." I am sure a debate on this subject would elicit valuable practical information.

I am, Sir, yours, &c.,

ANOTHER M.O.S.

Answers to Correspondents.

"HIBERNICUS":—Had we, as you seem to imagine, any ill-will against Irish Dental Licentiates we could scarcely wish for a better opportunity of gratifying it than by printing your letter *in extenso*. We have, however, only expressed with reference to this subject, opinions which are stated in much more forcible language at all meetings of the profession, and which are held by not a few of your own colleagues

"A DENTIST'S WIFE" complains that the meaning of the letters L.D.S. is not understood by the public and asks "who is to teach the public"? To the latter we should answer "the licentiates themselves," though members of the Medical Profession, can and do, afford valuable assistance in helping their patients to distinguish between qualified and unqualified practitioners. But we are not disposed to allow that there is much justice in the complaint: considering that the Dental License is comparatively a recent institution, and has been borne hitherto by a comparatively small number of persons, we think the public has been by no means slow in appreciating its value.

Mr. C. S. BENSTED is thanked; a further communication on the subject appears in this number.

Books and Papers received.

TRANSACTIONS of the Illinois State Dental Society, 1881; Rapport Annuel de la Société Syndicale Odontologique; British Journal of Dental Science; Le Progres Dentaire; Revue Odontologique; Independent Practitioner; Lancet; British Medical Journal; l'Odontologia; London Medical Record; Chemist and Druggist; Birmingham Medical Review; Transactions of the Odontological Society; Transactions of the Odonto-Chirurgical Society; Vierteljahresschrift des Vereins deutscher Zahnkünstler, &c., &c.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

THE MEDICAL DIRECTORY FOR 1882.

We desire again to remind our readers that Messrs. Ash are acting as agents for the supply of the above work to Members of the Dental profession, and that all practitioners are particularly requested to order their copies through Messrs. Ash.

SUBSCRIPTIONS.

Members are reminded that Subscriptions for the current year are now due, and are particularly requested to forward them without delay to the Treasurer, JAMES PARKINSON, Esq., at 40, Leicester Square.

THE JOURNAL

OF THE

BRITISH DENTAL ASSOCIATION

A

MONTHLY REVIEW OF DENTAL SURGERY.

No. IV.

APRIL 15, 1882.

VOL. III.

Apprenticeship and Student Registration.

BEFORE the relations of apprenticeship to student registration can be profitably discussed, it will be necessary to consider the meaning attached to the terms apprenticeship and pupilage in sec. 37 of the Dentists' Act, and also in the dental curriculum, originated and acted upon by the College of Surgeons, England, and now prescribed for general use by the Medical Council. For it is well known that apprenticeship, pupilage and such like terms have even more than a double meaning.

(1) In the one case these terms indicate an engagement of a strictly educational or professional nature; the master engages to teach and the pupil to learn, and the time allotted for the process is as short as may be deemed sufficient for the attainment of the knowledge required by the pupil.

(2) In the second case the engagement is of a commercial or business nature; the master engages to supply opportunities for the acquisition of manual skill, and the apprentice engages to serve, embracing opportunities of learning as they offer.

The servitude, often entered upon at the age of fourteen, is usually extended to five or seven years, and commences with the performance of the duties of a laboratory or workshop servant, advancing in importance until the expiration of the term, by which time the apprentice has, or should have become, an expert dental mechanist.

In many, perhaps in most cases, relatively small weekly wages have been given from the first by the employer who, notwithstanding, secures by this arrangement a necessary but cheap form of labour: an economic method which finds extensive application in the conduct of many mechanical trades wherein fully half the labour is, in some establishments, performed by apprentices.

(3) There is yet a third condition of apprenticeship, which may be described as purely formal, and is entered into only for the purpose of getting the schedule of admission to an examination filled up. The so-called student has access at his pleasure to the laboratory of the practitioner, and it is understood that he is to attend as much or little as he thinks fit; and when present he may take part in the work or content himself by looking on. This condition of formal private pupilage prevailed to a great extent in the latter days of Medical Apprenticeships, and is not altogether unknown in the Dental profession.

It will be generally admitted that the Dentists Act has educational aims only, and also that the Medical Authorities entrusted with its administration must keep the perfecting of dental education only in view. They can take no account of the business considerations of practitioners

respecting the supply of mechanical labour. How, under the provisions of the Act, can dental practitioners be best educated, is the problem to be solved. Clearly the first described (1) or professional apprenticeship is the only one the authorities can support. The business apprenticeship, (2) limited to such, does not concern them, and formal pupilage, (3) if discovered, would be disallowed.

The existing dental curriculum requires that three years shall be devoted to the study and practice of dental mechanics under a registered practitioner, and at the Annual Meeting of the Odonto-Chirurgical Society, it was, after discussion, determined that a less time would be insufficient. It was at the same meeting agreed that student registration need not precede the commencement of apprenticeship. Unfortunately the discussion did not embrace the whole question of apprenticeships in their educational bearings, and turned rather upon personal convenience than upon educational advantages. Under the present rule, issued by the Medical Council, four years must be devoted to professional education, and its beginning must, as we understand it, be marked by student registration, which again must be subsequent to the completion of the required preliminary education. In other words, the student must, during the four years, be free to devote his whole time and energies to the acquisition of professional knowledge, including therein, if need be, mechanical dentistry, under private tuition. He cannot present himself for his final professional examination until he is twenty-one, consequently, whatever may be the date of apprenticeship, his student registration need not be made before the expiration of his seventeenth year, antecedent to which he has had very ample time to complete his general education and to obtain the necessary attesting certificate. Four years is not a day too much for the professional studies, and to

crowd into it any of the subjects of general education, would surely be a retrograde movement, tending to injury, if not to actual degradation. Far better would it be to associate chemistry and metallurgy with the mechanical dentistry of the first two years, and thus relieve from overcrowding of subjects the two years usually devoted to the study and practice of general and special surgery in general and special hospitals and schools. The division would lead to a more complete knowledge of chemistry, and thereby secure a very great advantage to the dental practitioner.

What would be said to the proposal that the general education of the medical student should be allowed to extend into the four years allotted to his professional education? Yet the medical has not more to learn in the four years than has the dental student, and the protective regulation needed in the one case is equally needed in the other.

The present rule of four years has been in operation for upwards of twenty years with the Royal College of Surgeons of England, and has worked smoothly and with good effect. It seems a pity to disturb at this early period of national systematic dental education a regulation which secures the student against the encroachment of general into the period given for special studies, and against which no complaints had heretofore been made. And as exceptional cases can be dealt with exceptionally by the Medical Council no great hardships need, with the present arrangement of registration, be suffered.

GUTTA percha may be readily purified and bleached in small quantities by adding to a solution in benzole a little fine plaster and shaking—when all insoluble impurities are carried down, and after decanting, the gum may be precipitated with alcohol, dried and pressed.

The English Correspondent of the "Missouri Dental Journal."

AT another page will be found a letter from the Secretary of the British Dental Association, replying to an article which lately appeared in the *Missouri Dental Journal*. The article in question, one of a series purporting to come from their "English Correspondent," abounds with strictures upon the course pursued by the Association from first to last, and vilifies not only the actions but the motives of those who have taken an active part in the movement.

The article, like its predecessors is full of misstatements and misrepresentations, the responsibility for which the author, though perhaps sufficiently well-known, eludes by writing under the veil of anonymity, a veil which he has apparently feared to drop, although, unless we are mistaken, he has been challenged to do so some time since.

Our contemporary the *Missouri Dental Journal* is, we imagine, "not responsible for the opinions expressed by its correspondents," still we regret that it has given free insertion to statements so wide of the mark. Anonymous letters emanating from a writer who is either strangely deficient in information, or in good faith, or in both, call for no answer, and it is only worth while to take any notice of the matter on one account, viz., that there is still some misconception existing in the minds of some of our American confrères, for whom we have the warmest respect and liking, as to the grounds upon which recognition has been accorded or refused to various American diplomas.

It cannot be too often, nor too plainly stated, that the Medical Council requires as a *sine quâ non* for its recognition, a general equality in the curriculum and the examination, as compared with those which exist in this country. Once let an American or other foreign college show that they provide this, and they will be recognised tomorrow. There is nothing whatever in the way of *protection* in the refusal to recognise any of the American or other diplomas. The contention that they should be admitted upon the English Dentists' Register, without

showing a general equality of curriculum and of examination, simply amounts to this: that we should accord to foreigners a degree of indulgence which we refuse to our own countrymen: that we should exact from those who have pursued their education in this country, a certain length of study, a course of study, and the passing of certain examinations, but that we should ask of the foreigner, or of the Englishman who seeks his education abroad, a shorter curriculum, a course of study less comprehensive, and examinations perhaps less searching.

Can it be that such a contention is seriously maintained? Is it not rather that there are those who desire for some secret reason to fan professional jealousies, and to stir up ill-feeling and misconception where nothing but cordiality should exist.

For be it remembered that at the Congress last August, American speakers on dental education gave in their adherence to our scheme of education, and that American dental periodical literature is, year after year, full of regret that a more comprehensive scheme has not been successfully promulgated in their own country.

ASSOCIATION INTELLIGENCE.

Correction of the Dentists' Register.

THE following extract from the Minutes of a meeting of the Representative Board, held October 15th, 1881, will be read with interest in view of the approaching session of the General Medical Council:—

“Doubtless the members of the Board will have read the case and the opinions thereon of Sir John Holker, Mr. R. S. Wright, and Mr. G. A. R. Fitzgerald, published in the August number of our Journal. These highly important documents were forwarded to the Medical Council, with a copy of the following resolution, (July 16th, 1881):

“That in strict conformity with the practice uniformly followed of placing before the Medical Council any facts or OPINIONS bearing upon the administration of the Dentists

Act of which the Association may have become possessed, the joint opinion of Sir John Holker, Mr. R. S. Wright, and Mr. G. A. R. Fitzgerald, upon the meaning of Section 6, Subsection (c), be at once forwarded to the Medical Council: that the Association venture to hope the Council will cause to be placed on their Minutes the accompanying joint opinion, together with the high legal opinion of Mr. (now Mr. Justice) Bowen read before the Council in July, 1880, with the opinion, also then read, of Mr. G. A. R. Fitzgerald: and that the Association earnestly hope in the presence of a great preponderance of high legal opinion in favour of a correction of the Dentists' Register, the Council will restore to the Register the recently erased descriptive terms 'with Medicine,' 'Pharmacy,' &c.: and at its convenience proceed to the correction of the Register by the erasure of names registered in the midst of doubt, or take such other steps as may lead to the production of a Register legally correct.'

"The General Council has not met since our communication was addressed to the Registrar for presentation, but the proposal of an erasure made in the last paragraph of the opinion, and our request that the Council should take action thereon has been replied to by the Executive Committee of the Council to the following effect:—

"That the Committee acknowledge the receipt of the foregoing communication, and inform Mr. Turner that, in the opinion of the Committee, the steps requisite to be taken to try the correctness of the course taken by the General Council under the advice laid before it, rests with the Dental Association, and not—as suggested in the opinion now forwarded—by the removal of a name which, in the judgment of the Council, is registered in conformity with law.'

"I think it more than probable that this answer has been framed under a misapprehension of the legal position. It has hitherto been very generally supposed that persons who have registered as in the practice of dentistry with pharmacy, but who are by law forbidden to practise pharmacy, had thereby rendered themselves liable to be proceeded against under Section 35 of the Act, and that the Association might institute such legal proceedings without reference to the Medical Council. This does not appear to be the case. Counsel, in the opinion, have pointed out if not abso-

lutely the only, at all events the proper, manner of proceeding to test the legality of the disputed registration, viz., by removing a name from the Register. And no discourtesy will be involved in preferring a high—it may be said the highest—legal opinion within our reach upon a strictly legal question, to the opinion, upon the same question, of a small committee of eminent medical men, one at least of whom would favour the utmost laxity in the initial registration.

“Dr. Quain’s contention that Parliament would not allow the exclusion from the Register of persons whose claims we have, under high legal sanction, called in question, is answered by the course Parliament has taken in an Act similar in purpose and scope to the Dentists Act—the Veterinary Surgeons Act passed last session. Under its provisions, unqualified veterinary practitioners can claim registration provided they were in practice four years before the passing of the Act, but the claim must be supported by a statutory declaration to that effect, substantiated by a similar declaration to the same effect by a witness, and approved by the Council of the Veterinary College. Unregistered practitioners, unless qualified, are subjected to similar disabilities to unregistered dentists, and similarly punishable are those who assume professional titles they do not possess. Parliament, in the Veterinary Surgeons Act, has shown no disposition to encourage by registration ignorance, false pretensions, or imposture, and there is not the slightest reason to suppose that it did so in the case of the Dentists Act.

“The Dentists Act provides for the registration of those persons who, in conjunction with the practice of pharmacy, practised also dentistry, and there are many such, indeed in some of the smaller northern towns they are the only dental practitioners. Between these and persons who practice dentistry separately, this Association in its laws and practice makes no distinction, provided the rules of professional conduct binding upon the one are not violated by the other under cover of the second calling. But it cannot be rightly held that the Act was passed to enable persons to declare themselves dentists who were not already dental practitioners, or to encourage persons on mere colourable pretext of having at some past time, in their pupilage, perhaps, pulled out a few teeth, to register themselves as dentists for the purpose of enabling them to take up dental practice at some future time should it suit their convenience to do so. It is against the success of such preten-

sions that the Association is justified, and indeed in the discharge of its duties, is called upon not only to protest, but to offer hinderance so far as it has power so to do. In a law court if new evidence comes to light after a trial, or there is reason to believe there was at the time of trial mis-direction, owing to imperfect or imperfectly considered evidence, a new trial is directed. Under either of these heads we have recorded in the Journals and elsewhere very substantial grounds for asking for a reconsideration of the whole question of the alleged incorrect registration. We shall act quite within our duty, and within the lines of courtesy, in asking that the lately obtained opinions, together with the resolutions we have submitted to the Council, shall be considered by the General Council at its next session. Until the events of that session are known it will be unnecessary for us to consider what further steps (if any) should be taken in behalf of the correction of the Register.

"Resolved that the following letter be addressed by the Hon. Secretary to the Registrar for presentation to the Medical Council:

"Sir,—I am directed to acknowledge the receipt of your communication dated August 3rd, and in reply thereto to state for the information of the Medical Council that the Representative Board is advised that the question lately raised respecting the correction of the Dentists' Register cannot be settled by action taken under Section 35 of the Dentists Act. Furthermore, that inasmuch as the Council in full session, Feb., 1881, decided that sufficient evidence of error in registration had not been adduced to justify the erasure of the names then under consideration, it be asked that the memorial, with the appended legal opinions constituting strong additional evidence, addressed to the Council, and in part considered by the Executive Committee on the 28th of July, be laid before the Council at its next session.'"

The Examinations for the Dental License sine Curriculo.

IN accordance with the decision of the Representative Board, reported in the February number of this Journal, the following letter was sent to the Council of the Faculty of Physicians and Surgeons of Glasgow; and the answer, which is printed below, has been received from that body. The letter, which will be found on another page of this number, was at the same time sent to the Council of the Royal College of Surgeons in Ireland.

BRITISH DENTAL ASSOCIATION,
40, LEICESTER SQUARE, W.C.

*To the President and Council of the Faculty of Physicians and Surgeons
of Glasgow.*

GENTLEMEN,—The British Dental Association, incorporated for the purpose of promoting Dental education, and of supporting the spirit and provisions of the Dentists' Act, in furtherance of these objects begs respectfully to ask, through its Representative Board, your favourable consideration of the following proposals:—

A sufficient period, it is generally considered, has been given for those established practitioners who were precluded by circumstances over which they had but little control from complying with the terms of the curriculum, to present themselves for examination *sine curriculo*. It is fervently hoped, and indeed reasonably expected, that all future examinations will be conducted with the view of strictly maintaining an uniform and high standard of education, and without any reference to exceptional conditions whatever.

We trust, therefore, that all future candidates for examination will, in respect to the extent and nature of the examination, be regarded in the same light as though they had complied with the terms of the curriculum, and it is hoped that some more sufficient guarantee of the professional character of applicants for examination than has hitherto been deemed needful will also in future be secured.

In urging the adoption of these conditions, we are but asking for the observance of rules which have been strictly followed by the Royal College of Surgeons of England in respect to its dental examinations, and the strict observance of which by all the licensing bodies we feel sure is absolutely necessary to the maintenance of the educational value of their respective Licentiateships in Dental Surgery.

We beg to enclose for your inspection, copies of Articles of Incorporation, Bye-laws, a list of Members, and of the Executive of our Association.

We have the honour to be,

Your obedient servants,

(Signed by the Members of the Business Committee.)

Faculty of Physicians and Surgeons, Glasgow,

March 25th, 1882.

SIR,—I have to acknowledge receipt of your communication, and of the Articles of Incorporation, Bye-laws, and a List of Members, and of the Executive of your Association.

At a meeting of the Council of the Faculty held yesterday, I submitted your communication for consideration. The Council of the Faculty believe that your letter has been written without an adequate knowledge of the facts. You "trust that all future candidates for examination will, in respect to the extent and nature of the examination, be regarded in the same light as though they had complied with the terms of the curriculum."

The answer to this is that it was never contemplated to have an examination for candidates *cum curriculo*, and another for those *sine curriculo*. The principle of the present arrangements is that all candidates are subjected to the same examination. Its practical working is exemplified in the result of one of the recent quarterly examinations. There were three candidates, of whom one was a curriculum candidate, and the other two *sine curriculo*. One of the latter passed, the other two being rejected.

The number of candidates admitted *sine curriculo* by this Faculty is now very small, there having been no *new* admissions since July last.

I may take this opportunity of stating that all candidates for the Dental License of this Faculty are now subjected to an examination in practical Dentistry in a Dental Hospital.

I am, Sir, your obedient Servant,

ALEXANDER DUNCAN,
Secretary.

James Smith Turner, Esq., *Hon. Sec.*,
British Dental Association.

To Alexander Duncan, Esq.

DEAR SIR,—I am directed by the Business Committee of the British Dental Association to acknowledge your courteous communication of March the 25th, and to say that they will be able to give a definite reply to whatever complaints may reach them regarding certain matters alluded to in their letter to your Faculty.

I am truly yours,

JAMES SMITH TURNER,
Hon. Sec. British Dental Association.

Midland Counties Branch.

THE Annual Meeting will be held (by the courtesy of the Medical Committee) at the School of Medicine, Park Street, Leeds, on Wednesday, April 26th, 1882. The following will be the order of business:—

11 a.m. Council Meeting.

12 noon. Business meeting; Retiring President's Valedictory Address; Election of Officers, &c.

Adjournment for Luncheon.

2 p.m. President's Address.

2.30. *Casual Communications*:—J. Murphy, L.D.S., "Cases in Practice;" W. H. Nicoll, L.D.S., on "Saliva Ejectors;" J. S. Crapper, L.D.S., "Specimens and Suggestions."

3.30. *Papers*:—"On the Degeneration of Human Teeth, especially with reference to the Third Molar," by T. S. Carter, L.D.S.; "On the Conservation of Children's Teeth," by Mr. George Brunton; on "Woman's Second Fall," by F. Richardson, L.D.S.

6.30. Annual Dinner at the Great Northern Hotel. Tickets, 7s. 6d. each, may be obtained from E. J. Ladmore, Esq., 26, Park Square, Leeds. Members and Associates can introduce two friends to the afternoon meeting and dinner. Messrs. Spence Bate, F.R.S., of Plymouth, J. S. Turner, of London, and other gentlemen, have kindly promised to be present.

W. H. WAITE (*Hon. Sec.*),

Oxford Street, Liverpool.

ORIGINAL COMMUNICATIONS.

Celluloid.

By W. A. HUNT, L.R.C.P.Lond., &c.

THOUGH the failures with this material are many, the successes with it are quickly brought to the front by enthusiastic workers, whilst the failures and difficulties are not so freely allowed to see the light. All must acknowledge the extreme beauty of a well constructed celluloid plate, and if their wearers are allowed to be fair critics, there can be no manner of doubt but that celluloid in point of comfort surpasses everything we at present are acquainted with, provided it be used in properly selected cases.

As to the wearing or staying qualities of celluloid as compared

with rubber, unquestionably the general opinion is that celluloid will not last as many years in the mouth as rubber; but under the method of preparing it that I am about to describe, there is every reason to believe that it will compare with rubber very favourably on this point also.

In a description of celluloid, I noticed it stated that it was tougher than rubber, and also much lighter. On examining a thick shaving that had been cut from a finished plate, I noticed it bent more easily than rubber, and did not shrink back to its position like rubber; difficulty No. 1. I then took its S.G., and found it considerably heavier than either Ash's Black or S.P. rubber; difficulty No. 2. However, I let this pass, as having a higher S.G. it would be better than rubber for making an entire under set with, and most successfully have I so used it.

I noticed Mr. Gartrell's excellent plan of using a metal model and metal plug, and the fact that teeth and model are never embraced in one plaster investment as for rubber work; but the teeth and plug are in one plaster investment in one half of the flask, and the model in a separate plaster investment in the other half of the flask, consequently the accuracy of the bite depends upon the halves of the flask going perfectly together. Now in a steam boiler, when the flask was put in, you had to judge from the resistance offered by the central screw whether your flask was perfectly shut or not, you were quite working by guess. Therefore I thought, as a temperature of 280° Far. only was required, I should be wiser to use a glycerine bath with a thermometer, and putting my flask into a screw clamp and sinking it into the glycerine, I should screw it together, using what force I thought fit, and inspecting it from time to time to see that the flask was perfectly shut. In this way I succeeded well; but my glycerine, after a few heatings, got dirty, and soiled the delicate surface of my finished plate, and I find that those who work Celluloid inside a steam boiler also complain of dust or dirt getting in between the halves of the flask.

I found I could not rely on plaster models standing the severe pressure, but the getting a good metal model I always found a difficult and uncertain thing. Fortunately, at the recent International Medical Congress I made the acquaintance of Dr. Campbell, of New York, who has conquered the difficulties of which I have been speaking.

A writer in a contemporary of this month (March)—who speaks

with authority, as he is a lecturer on Dental Mechanics—says that “when the heat reaches 260° Far. the gas should be turned out. This is the highest point the thermometer should reach. The screwing down of the flask should begin from about 230° , turning very gently at first, so as to keep pressure on the base, then pause until 240° is reached, then have another turn or two, then another rest; the final squeeze should be at 260° Far.”

Now Dr. Campbell's experience and practice, which I have verified myself, is, I may say, a complete inversion of all this. His practice is to raise his steam up to 300° , and his flask also, then to put in his celluloid blank, and, at that temperature, in a few minutes the material softens so completely that the pressure of the finger and thumb is very nearly sufficient to turn the screws which bring the flask together. Thus the pressing into shape approximatively beforehand is not needed, and a blank that contains sufficient substance to flow everywhere, with excess, is all that is needed, and as the plate is not merely pressed, but really *fused* into its new shape, it will more certainly retain it.

Dr. Campbell, although using a steam boiler, has no steam in contact with the flask, and in reality the flask is heated in a dry chamber, surrounded at its sides, its back, and at the top and bottom, with steam at 320° Far. The front of this chamber is formed by a moveable shutter, which has a pane of plate glass in it, so that the operator can see all that goes on whilst he is turning his screws. Moreover, this chamber being dry and hot, the flask and its contents are heated up until all moisture is nearly gone; the plaster investment thus becomes very hard indeed, and able to hold its own against any pressure used. By means of a valve, which can be lifted at pleasure, steam can be admitted into this heating chamber, the shutter can be at once made steam-tight, and thus, if wished, rubber can be vulcanized as in any other machine.

Manifold are the uses of this ingenious machine; I do not pretend to give more than a brief outline of the principle which underlies its working. For instance, a combination plate can be made in which pure black rubber, the strongest and toughest of all, forms the plate and basis of attachment for the teeth, whilst celluloid forms the gums entirely; the result is a wonderfully strong, light and natural looking set which leaves nothing to be desired, and which in case of accident is readily repaired. Cellu-

loid pressed at this high temperature is much harder and tougher than by the old methods.

Yewil, March 20th, 1882.

REVIEWS AND NOTICES OF BOOKS.

ANTISEPTIC SURGERY, ITS PRINCIPLES, PRACTICE, HISTORY, AND RESULTS. By W. WATSON CHEYNE, M.B., F.R.C.S., Assistant Surgeon King's College Hospital, &c., &c. London: Smith, Elder & Co.

This book, which is the outcome of several years' labour devoted to experiment and to the accumulation of materials bearing on the subject, may be read with great interest and profit by the dental profession, as well as the whole scientific world; whilst to those engaged in investigating the pathology of dental caries and in verifying and extending the recent important observations of Messrs. Underwood & Milles, the book will be simply indispensable. Mr. Cheyne's first essay bearing on the subject, "On Micro-organisms in Wounds," gained the Syme Surgical Fellowship in 1877. He has since then repeated and enlarged his investigations in that direction. In his essay, which gained both the Boylston medal and prize of Harvard University in 1880, he discussed the various methods of antiseptic surgery, and, lastly, his dissertation on the whole subject embraced in the present work was awarded the Jacksonian prize of the College of Surgeons of England in 1881. This statement will be enough to demonstrate Mr. Cheyne's claim to speak with authority on the theme which he has chosen and which is becoming more and more recognized as of supreme importance in surgical pathology, and therefore in practical surgery itself. It would be impossible to fully review Mr. Cheyne's work in this Journal—the limits of space would not permit, and many sections, such as those dealing at length with the procedures of antiseptic surgery, are of only minor importance to the dental reader. That which will attract the dental student most is the exposition of the facts upon which the main theories involved are based, and Mr. Cheyne's exposition of these is at once clear and complete. The first and second chapters are devoted to an examination of the particulate theory of fermentation and the fermentation of boiled and unboiled substances. Commencing with clear definitions of the meaning in which these terms are to be

understood, these chapters ably exhaust the topics. They narrate concisely the labours of every important experimenter from Gay-Lussac, whose research on this subject, the first of any importance, was published in 1810, down to the writers, including the author, whose names are at the present day familiar to every reader. We agree with the author that in an attempt at any complete examination of his subject it was desirable to enter into a full historical review of the steps by which the present state of knowledge has been reached; and we think that the mass of information which he has laid before the reader, will prove invaluable to many who have not time or opportunity for searching out the literature for themselves. Among the facts which have been brought forward, the author draws special attention to the following, which he considers have now been made certain: Fermentations in wounds occur as the result of the entry of particles—micro-organisms—from without; a variety of methods of treatment may be grouped under the heading "Antiseptic Treatment;" lives are saved in proportion to the asepticity of the wound, and when the wound is kept aseptic, infective diseases more especially are avoided. The aseptic or Listerian method prevents the development of micro-organisms and the occurrence of fermentation in wounds.

After the opening chapters, chapters 8, 9, 10, 11 and 12, will prove of greatest interest to the dental reader. They deal at great, although not at undue, length with the subject of the relation of micro-organisms to fermentation, and the relation of micro-organisms to the fluids and tissues of the human body. Preliminary to the main topic, and to clear the ground, is given an ample account of the theories of spontaneous generation, heterogenesis and abiogenesis. We commend this work to all scientific students interested in the subject, and we think we have said enough to prove its special value to those whose labours are running in lines parallel to those pursued by the author.

LECTURES ON THE PHYSICAL EXAMINATION OF THE MOUTH AND THROAT. By G. V. POORE, M.D., F.R.C.P., Assistant-Physician University College, &c., &c. London: Adlard's.

These lectures were originally written for the benefit of students attending the class of clinical medicine at University College. They were published in the *Lancet* in 1880, and subsequently in an English and an American dental contemporary. The author has

been well advised in publishing them in their present form, and his little volume will be especially appreciated by the dental profession. Dr. Poore has ably epitomized the whole of the objective signs and symptoms of disease of the mouth and throat, and has condensed into a small compass a large amount of fact which, without his help, could be acquired only by an extensive research in general medical literature. The book will be of service to the student preparing for examination for the dental diploma, that is, if he has previously thoroughly grounded himself in the principles of his profession. To the old or young practitioner the perusal of these lectures may be confidently recommended. The greatest moral danger which besets specialists whilst in pursuit of their several departments of practice, is that of becoming narrow-minded. The more confined the area of practice, and the less intimate the connection of the maladies of the part with disorders of the general system, the greater does this danger become, and it therefore assails the dentist, perhaps, more imminently than any other departmental practitioner. Dr. Poore's lectures serve to remind the reader forcibly of the fact that a large number of diseases manifest themselves by characteristic signs and symptoms in those parts which are constantly under the view of the dental practitioner. It may often happen that by observation of these symptoms the dentist will be able, by timely warning, to put his patient on his guard against the approach of serious disease, or will be able to suggest to him or his medical adviser, the real nature of a malady, the cause of which has been obscure until revealed by its manifestations in the mouth.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

Odonto-Chirurgical Society.

IN our last issue we were only able to give a very brief account of the proceedings at the Annual General Meeting of this Society, which took place at the Edinburgh Dental Hospital on the 13th ult., Dr. John Smith, F.R.C.S.Ed., President, in the chair.

After the transaction of some formal business and the election of officers for the ensuing year, Principal Williams, F.R.S.E., read an interesting paper on "Dentition in the Horse and other Animals," of which the following is an abstract:—

After some preliminary remarks, he said that he might state, in the first place, that a horse had 40 teeth—12 incisors, 4 canines, and 24 molars. In a specimen which he held in his hand, the number of teeth was found to be 44 (the typical number), and, remarkable to relate, they were the teeth of a mare, in which, generally, the canines were wanting, or very rudimentary. When there were any, they were in the lower jaw, and, as a rule, they were not to be found in the upper jaw. But, in this case, there were two well-developed teeth above—a most remarkable circumstance, the like of which he had never seen before. One of the molars was diseased, and had to be removed. The mare lived for some time after that, and he watched the case very carefully.

A foal was born with two central incisors in each jaw, and a calf had eight incisors at birth, or a few days afterwards. A pig had four incisors at birth, or a few days after. He might state here a remarkable fact. In a horse the incisors were the central teeth; in the calf the central ones were cut first, and the side ones (corner) afterwards. But in the pig the corner incisors were cut first. That was a very kind arrangement of Providence, for, when a pig was sucking its mother, they knew how it tugged and tore at her, and, if the incisors were in the centre of the mouth, they would injure the lacteal parts. That was, however, prevented by there being only one incisor at each corner.

When nine weeks old the horse had four incisors, and when nine months there was the appearance presented by the very nice specimen which he now showed to them. There were in it four incisors cut and two cutting. At twelve months old the infundibulum, or "mark" of the central teeth, was commencing to be obliterated by the wearing down of the teeth. There were no changes in the incisors of the horse till he was two and a half years old, when the central ones were shed; at three and a half years the lateral ones; and at four and a half years the corner ones. At five years of age the horse was said to have a full mouth. He might state that no amount of care in the breeding of the horse, or in its feeding, made any great difference in the process of dentition. A Highland pony would have as full a mouth as a highly pampered horse. Perhaps, in some cases, where animals were very highly fed, the corner incisors might be cut a month or two sooner than if the horse was otherwise treated. But if they turned to the cow they found a remarkable thing. He had said that the calf had eight incisors. At the age of one year and nine

months the central temporary incisors were shed, and the permanent ones cut. If we took an animal of the Highland, or any of the unimproved breeds, although we found that, at two and a half years of age, the central permanent incisors were cut, still such an animal did not have a full mouth of permanent teeth till four and a half or five years of age. On the other hand, they found that improved breeds had at two years of age four permanent incisors. At two and a half they would have six, and at two years and nine months they would sometimes have a full mouth. They were as well furnished with teeth in every possible way at the age of two years and nine months as the unimproved animals were at five years of age. The science of agriculture, while it enabled the farmers to grow two blades of grass where only one grew before, almost enabled them to raise two animals instead of one. In the same time that one unimproved animal took to arrive at maturity they would have two improved ones in the same condition.

As regarded the molars of the horse, there were at birth, or shortly afterwards, three temporary molars in each jaw. At the age of one year the first permanent molar was cut, and it stood fourth in the row. When the horse was two years old the second permanent molar was erupted, and it stood fifth in the row. At three years, the two anterior temporary molars were replaced by permanent ones. The sixth molar was cut, and at the same time the remaining temporary molar, which stood third in the row, was replaced by a permanent one. He had an explanation to make with reference to the fourth molar. It was the shortest molar in the mouth, and it was the tooth that was most frequently diseased. His experience was, that amongst the herbivora—and he might include the pig—caries of the teeth did not exist; that is, the kind that affected the human teeth. He thought that, in these animals, there was no caries, but necrosis. This molar was a short tooth, but continued to grow almost as long as the animal lived. He then exhibited a specimen in which the obliteration of the nutrient foramen was nearly completed; the circulation thus cut off, necrosis of the dentine resulted, and he believed that was the only actual disease there was in the herbivora that we could compare with caries. He exhibited a specimen which had become soft, and, as a result, splits had taken place in the tooth. In consequence of that, the food had worked up into the cavities of the face, and, as a result, there were great discharges from the nostrils. One of the symptoms of a diseased tooth was a foetid discharge

from the nose, continuing often for a long period. If, by examination, portions of food could be found in the discharge from the nose, this would point conclusively to the fact that a cavity had been formed in the tooth which admitted of the entrance of the food into the facial sinuses.

The dog had 42 teeth, and the arrangement was not quite so symmetrical. In the dog caries was found similar to that which was found in the human being.

Then, as to camels' teeth, he had several specimens which he had received from India, but he had little to say with regard to them. It would be observed that in the upper jaw there were only two incisors, as they were termed by some writers on anatomy, but they appeared to him to be more like canines. There were only two canines and two incisors. It was a remarkable arrangement that in the ruminating animals the incisors were in the lower jaw only.

A beautiful arrangement existed with reference to the ox's teeth. They were fitted in quite an elastic way, and not fixed. When the chisel-like teeth were made use of in the act of grazing, there was an elastic cushion which prevented fracture of the teeth. He never saw a diseased tooth in the cow, and broken teeth very rarely. Notwithstanding the force with which a cow grazed in a field, and the liability of coming into contact with stones, it seldom happened that the teeth were broken, owing, no doubt, to the fact that they were on an elastic cushion. Returning to dentition, he might mention that young oxen—two or three years of age—sometimes began to lose flesh, and many of them were condemned all over the country as suffering from chronic disease, and very often destroyed. The majority of these cases were suffering from the crown of the temporary teeth remaining in the gum, and preventing the animal from masticating its food. (Several specimens of these were shown.) These animals were supposed to be in a dying condition, and he had found in many cases these teeth sticking into the gums, and preventing the animal from eating. There was a man in the North of England who followed the profession of an animal dentist. He went about and examined the cattle, and gave them relief at once—by removing the portions of the teeth that were troubling them.

The Principal then exhibited a specimen showing the formation of a tumour, and several scores of teeth in a cavity. They would notice that the teeth were very imperfect. He had seen tumours

of that kind with 500 imperfectly developed teeth. It would be very interesting to be able to explain how these were formed. He had seen two or three cases of the kind, and the late Professor Dick had a specimen containing an immense number of these imperfectly developed teeth. He had also seen teeth growing from the petrous portion of the temporal bone, and he had removed from one animal three of them consecutively one year after another. It was a most remarkable thing, and very difficult to account for. He had also seen teeth in testicles, and various parts of the body, enclosed in little tumours. These teeth were generally very hard. The teeth from the petrosa were excessively hard. They were most difficult to remove, requiring very great force before they could be detached from the surroundings, very often breaking, and breaking with a fracture like ivory. They seemed to be very hard dentine, and why they should be there was beyond his comprehension. He exhibited a specimen, and pointed out that the gum came very near the crown of the teeth. With regard to the removal of the molars, it might be observed that the proportion of teeth exposed was very short; and when they took into consideration the length of the fang, as shown in the specimen now exhibited, they would understand how extremely difficult the removal of a tooth became. He had, however, removed them without any difficulty whatever by trephining. He thought that it was by far the most humane way; for, however strong the forceps might be, there was very great danger of fracturing the jaw, owing to the great length of the fang. It was difficult to get anything to grasp the molar. They could not fix the mouth of the horse in the same way that they could fix the mouth of a human being. Then, if they used chloroform, or any anæsthetic, there was great risk of the animal being suffocated by the hæmorrhage. He had trephined the lower jaw, and he considered it was the most expeditious and best way of dealing with such cases. He then exhibited a specimen showing disease in the facial bone (Osteoporosis), and where the teeth were quite healthy. It was an animal five years of age. That was not an uncommon disease, and it had been increasing of late years. He had seen more of it since foreign horses had been brought into the country. In this disease the skeleton became excessively brittle. He had a specimen showing that twenty-four ribs of a horse had been fractured, some of them in three or four places. It was remarkable that, although the bones in the face were the first to suffer, the horse might continue

to have the disease, and still the teeth did not suffer. He then exhibited two cases of teeth, each of which seemed as if it contained another within it. He had only seen those two cases in all his life. In his concluding remarks Principal Williams said that he should have been glad if he had thrown any light on the diseases of the teeth. If the information he had given as to the absence of caries in the herbivora—if the information he had given, that after a long experience he had not met with what he considered true caries in those animals, would throw some light on the question of food, or something else which might be the cause of caries in the human being—he should be highly gratified. He begged to thank the Society for the attention with which they had listened to him.

The CHAIRMAN said he was sure that the Society was very much indebted to Principal Williams for the interesting remarks he had made on the teeth of animals. He had dealt in an able manner with the anatomy, physiology, pathology, and surgery of the subject. An arrangement might be made to have a full discussion on the paper at a future time. Meanwhile he would be glad to hear remarks by any gentleman. He was sure they would all agree with him that the Society should render a hearty vote of thanks to Principal Williams.

Mr. HELE, Carlisle, said he was anxious to have asked Principal Williams whether the alteration of the period of dentition affected the regularity or the irregularity of the teeth—whether the rapid development was characterised by any malformation?

Principal WILLIAMS said that sometimes there was malformation, but generally, as the jaw expanded, the teeth got all right.

Mr. WILSON, Edinburgh, said they would remember that in the Factory Act rules there were long tables as to the state of the teeth of children about twelve or thirteen years of age. It was shown then that, even in the teeth of the human subject, there was great irregularity; and that where the teeth were erupted earlier than the average, the physical development of the individual was equally advanced. Apparently, they might conclude that, with the rapid development of the teeth of the cow, they might have the physical development advanced in the same way. As to horses escaping toothache, he suspected that the plan, not of extraction, but of displacement, as practised by

Principal Williams, was almost identical with the dentist's use of the elevator.

Dr. WALKER, London, said that he had had experience in the agricultural districts in the West of England, as well as in London. At first he found caries much more common among children in London than in the West of England; but latterly he had found as much caries amongst the children in the country as in the towns. He did not know whether it might be due to the fact of the agricultural classes being now much better fed, and from the fact of their having meat regularly on their table. He found that they were not content unless they had meat every day. If the herbivora were free from caries, might it not be that the food had something to do with the condition of the teeth? It might also be due to nervous irritation, produced by an excited brain at an early age. In the West of England many of the children were sent to work early in order to earn money for their parents. It was a new line of thought to hear from Principal Williams that caries was not found in herbivora. He thought that he could count on his fingers the number of children he knew who had teeth free from caries at the age of six. As to the treatment of horses, there was a man in London at present doing a very extensive practice as a horse surgeon dentist in the treatment of laceration of the tongue. The external edges of the molars were so sharp in many cases as to cause laceration of the tongue. That was frequently due to the bit touching it; and this man was reaping a rich harvest by carrying a file in his pocket and rubbing the teeth.

Principal WILLIAMS said he found that veterinary surgeons often rubbed the teeth with files when the state of the teeth had nothing to do with the condition of the horse. He thought that the gentleman in London referred to was making a speciality of nothing at all. There were no doubt cases where it was necessary to file the teeth, but there were hundreds of cases where the teeth were filed when it was not necessary to do so.

Mr. FINLAYSON asked if the porous disease of the bone referred to by Principal Williams had been found in the Highlands or in the towns?

Principal WILLIAMS said he had found it in all kinds of animals—in Shetland horses, and in all breeds. It was very commonly found in horses in pits.

The CHAIRMAN again expressed to Principal Williams the thanks

of the Society for his kindness in laying such an interesting communication before them.

The meeting then proceeded to the consideration of the questions regarding the Dental Curriculum which will shortly be brought before the notice of the General Medical Council.

The CHAIRMAN said—Some questions of considerable importance to Licentiates in Dental Surgery having been lately before the Executive Committee of the General Medical Council, a very uniform opinion has been expressed by the resident members of the Odonto-Chirurgical Society that an opportunity should be afforded at this its annual meeting, of considering such matters, and ascertaining the views of the Society regarding them. Members are doubtless aware of the letter addressed by Professor Turner, one of the Edinburgh representatives at the Medical Council, to the Executive Committee of that body, wherein he desires to obtain more specific information in reference to certain important details applying to the education, preliminary examination, and registration of dental students. In that letter, which is dated October 31, 1881, Professor Turner asks whether, as in the case of medical students, dental students ought not to be allowed to count one year of an apprenticeship, as one year of the four of professional study required. Again, three years' instruction in mechanical dentistry is required; and Professor Turner draws attention to the fact that it is not stated whether those years must be taken during what is termed the four years of professional study, or may be taken in whole or part antecedent to registration as a dental student. He therefore considers it advisable that the expression, "Four years in professional studies," should be more precisely defined, and adds that it seems to him only reasonable that some portion, if not the whole, of the three years to be spent in mechanical dentistry should be allowed, even if taken before registration, to count, since there is nothing rendering a literary examination necessary previous to entering on workshop duties, as there is prior to entering on a course of scientific lectures: and again, that it is scarcely practicable to go through an efficient training in the workshop, if during the same period the student's time is to be occupied in attending lectures and hospital practice. Such is the general import of Professor Turner's letter, which will probably lead to a settlement of the matters touched upon at the next meeting of the Medical Council. But pending such settlement, it seems fitting and expedient that this Society should ex-

press whatever opinions it may entertain in connection with this subject. Perhaps the most important matter for consideration here is the difficulty pointed out in the last clause of Professor Turner's letter, when he alludes to the inexpediency, if not impracticability, of an efficient workshop training being followed out while attending lectures and hospital practice, since it must be remembered that, even were there sufficient time for such training, the centres of dental education and examination are very few in number, and in view of the possible influx of dental students from provincial districts year after year, it would be difficult to find in such centres an adequate number of registered practitioners willing to afford each candidate three years' mechanical instruction in his workshop. These seem the principal questions at issue on this matter. Their importance is considerable, and Professor Turner certainly deserves our thanks for the trouble he has taken with regard to them. He quite agreed with Professor Turner that it was necessary to bring this matter before the General Medical Council. He thought it ought to be left to the option of the candidate whether or not his mechanical instruction should be taken before or after his preliminary examination. Many lads coming from provincial districts might be very good mechanical dentists before they came to the town. A lad might have been an assistant to his father, and it would be a very hard case to say that, because he had not taken his preliminary examination before he became a good mechanical dentist, he must enter the workshop for another three years. He also thought that the fact of a lad having spent three years as an apprentice in the workshop might be taken into account as one of the four years of professional instruction of the curriculum. He held that the mechanical training was equally important with the class and hospital instruction; and he would suggest that the four years' professional instruction, more properly so called, might be reduced to three years, in virtue of a candidate having completed his mechanical instruction. The amount of class attendance and hospital attendance demanded would occupy any student fully two years. It was not thought very advisable by the licensing boards to cut it so very fine as that. They could scarcely cut it down to less than three years; but at present four years was absolutely required after passing the preliminary examination. A lad must be a dental student for four years at present, and during that time he was expected to take his mechanical dentistry. But if a student

who had a good mechanical education came forward, it would be desirable to say to him, "As you are already a good mechanical dentist, we will consider three years sufficient for you." This would diminish the four years by one year, in consideration of his having acquired a knowledge of mechanical dentistry.

Mr. MACLEOD said that he thought there was a slight misconception with regard to the subject. The Medical Council had not said that four years of professional study should be gone through by each dental student, but had said to the medical student, and therefore by implication to the dental student, that the preliminary examination in arts should be passed four years prior to going up for the final professional examination. They, however, stated the kind and quantity of professional instruction which he had to receive during the period of study. Amongst the rest was this: "that three years' mechanical dentistry should be gone through;" and he (Mr. Macleod) understood that these three years of mechanics formed part of the professional study. He held that if it was not so, it ought to be so; because the mechanical training that a young man received was the fundamental, and therefore an essential portion of his education. As the Odonto-Chirurgical Society, they must insist on the fact that the mechanical education the student received, should be recognised as part of his professional training. They must not allow it to be taken as such *ex gratia* by any licensing body, or by the Medical Council. This being granted, they find that the other subjects of study, as ordained by the Medical Council, occupied two years, making in all a period of five years' study. The English College of Surgeons, which held a charter of its own, and was altogether independent of any control of the Medical Council, enacted that a dental student should be engaged during four years acquiring his professional knowledge; and must pass his preliminary examination previous to beginning such course. But with what the Royal College of Surgeons in England resolved upon we have nothing to do. We are subject to the control of the Medical Council, and to whatever they enact we must give due submission. Keeping this in view, we may see good reason in the question put by Professor Turner, and possibly find that the answer to it is simple and evident. Professor Turner, taking a sound and common sense view of the situation, asks, Why should the dental student be compelled to pass his preliminary in arts four years prior to his final examination, when that preliminary in

arts is not necessary to the acquisition of proper mechanical knowledge, although it is absolutely necessary to the thorough understanding of the purely scientific and technical studies, which the student takes up when he enters on hospital practice and college tuition? This question contains within itself the answer. If the Medical Council enact that the dental student should pass the preliminary four years *prior* to his final professional examination, they would commit a mistake; for, having resolved upon a curriculum which necessitated five years' study, and of these, three to be devoted to the mechanical branches of dentistry, it must be evident that the knowledge implied in the preliminary is not absolutely necessary for such mechanical instruction; while, during these three years, the student might carry on a course of reading, the better to qualify him for the pass. Then, why compel such students to take the preliminary until they are about to enter upon their collegiate studies? If, on the other hand, the Medical Council deem it fit to compel the student to pass the preliminary before beginning any of his professional studies, then, as these three years' mechanical training do form part of his professional training, the Council must, to carry their action to its logical conclusion, ordain that in the case of a dental student, this preliminary must be passed five years prior to his going up for his final examination. He (Mr. Macleod) was sorry to see that the Edinburgh College of Surgeons had returned an answer to Professor Turner's letter, which contradicted itself. This answer was to the effect that the three years' mechanics might be taken either *before* or *after* the preliminary, but that four years of professional study had to *succeed* the preliminary; and that time spent prior to this in acquiring mechanical knowledge would not count. The College of Surgeons, however, proposed that *while these years are not to be recognised, they were at the same time to be held valid*. Valid for what? How could anything be held valid that was not to count? Now, let them think of the cost entailed upon a lad who had served three or five years' apprenticeship in the country (as all cannot serve their time in the city), if these three or five years are not counted as part of his professional studies. It simply meant that instead of five years, our country apprentices would require to spend seven or nine years in professional study. Mr. Macleod also said that he thought there was an erroneous limiting of the term *professional studies* to the collegiate course, and demanding four years of such; when it is quite possible for a

lad of average ability to fulfil the collegiate requirements of the Medical Council in two years. Even taking the way in which Dr. Smith has put the matter to-day, one year's waste of time is still necessitated to the student, as it compels him to take three years to accomplish what he might do in two. This is a gross injustice to the student. He did not go so far as to say that every young man should be recommended to go through in two years; some of them might take three or even four; but if that was through force of circumstances, inclination, or natural impediment, no one could help it. But it was not for any body of men to place legal impediments in the way of persons fulfilling a task which had been set before them, or to make the access to the profession more difficult than it requires to be. What advanced education and higher culture might demand in the future he could not say; what they had to do with was the present. And looking at the necessities of their training, he thought that the Society should give it as their opinion that the preliminary examination should not be demanded of the dental student until immediately prior to his beginning the collegiate education. He would then be permitted to take his mechanical training in such places as his circumstances compelled; and that, as now, for a period of three or more years as he chose; and the members of the Society, as practical men, knew that even five years was a short period in which to turn out a really first-rate mechanical dentist. He therefore moved the following resolution as the deliverance of the Society on the subject:— "That although the Society are of opinion that the three years' mechanical training is, and always must be, an essential part of the professional education of the dental surgeon, they do not consider it necessary that the dental student should be compelled to pass the preliminary examination in arts until prior to beginning his hospital and surgical studies."

The CHAIRMAN said he quite agreed with what Mr. Macleod had said. The question at issue in Mr. Turner's letter, however, was not a change in the curriculum, but it was to interpret how the studies prescribed were to be arranged, and that was the reason why the College of Surgeons did not enter into any alteration of it. The College had not entered at all into the question of the extent or duration of the curriculum, but merely whether or not the imperative amount of mechanical instruction might be taken before the other classes and the hospital instruction. The question was, what was the interpretation that was to be put on

the curriculum—whether a lad might take his mechanical instruction before he passed his preliminary examination, and if so, whether it would be valid, although not in that case counting among the four years' post preliminary studies.

Mr. MACLEOD said he did not think he had said anything that would lead it to be supposed that he wished the Medical Council to change the curriculum. He held that it was not possible (as the English Royal College of Surgeons seemed to think) for a student to do three years of mechanical dentistry, and pass through the other portions ordained by the Medical Council, in four years. He was anxious that these three years of mechanical dentistry should be carried out in their entirety, and that wherever passed, be it in town or country, the whole term should be honestly recognised. He thought that the Society should claim for the student liberty to pass the preliminary examination at any time prior to beginning his hospital and surgical studies.

Mr. WILSON said it was simply an absurdity to suppose that any student could take his mechanical dentistry and medical, dental, and hospital classes within four years. They wanted to extend the number of years, and so were really proposing that the curriculum be altered. If they were to take three years for the mechanical and two for the medical, that would be five. If that were fixed as the minimum, they would not be interpreting the present regulations, but proposing an amendment.

The CHAIRMAN said that it was leaving it optional. The intention was not to interfere with the curriculum, but the question was, Should it be in the option of the student to take his mechanical dentistry within the four years after the preliminary, or take it outside, before the preliminary?

Mr. MACLEOD said that the Dentists' Act neither fixed the kind of study nor period of study. The Licensing Bodies, under approval of the Medical Council, arrange the curriculum, and it was to clear up certain doubts as to the curriculum, as much as anything else, that had led Professor Turner to put his queries to the Medical Council. He thought that the Society ought to let their views on the subject be distinctly known.

Mr. WILSON said that they wanted to encourage the dental students to become medical students as well.

Mr. CAMPBELL, Dundee, said he had much pleasure in seconding Mr. Macleod's motion, and he thought it should be put to the meeting. His feeling was that they should do all they could

(consistent with good service to the public) to make the attainment of the dental licence easier, and not more difficult. By and by the general public would require all the dental skill they could get, and for a time there would not be so many in the ranks of the profession as now. He thought that in many cases the three years' mechanical training might be acquired by young men before coming to the centres where the medical schools are. In provincial towns the three years' mechanical training might be got, then they might pass their preliminary examination, and go to the centres, such as Edinburgh, Glasgow, and London. He considered that the mechanical training was not inferior in importance to the medical.

Mr. REES PRICE said he thought that this matter was made more of a difficulty than it really was. In England most of the men who went to the hospitals passed their arts' examination at the school. He did not know anything about the Scotch education, but it seemed to him that most of the men likely to become dentists would pass the arts' examination before they commenced their mechanical training.

Mr. WILSON said he was afraid that very few would be qualified to pass the examination at the time they usually left school for apprenticeship.

Mr. HELE said he thought that all students, before entering on any part of their work, should pass a preliminary examination. He himself had felt the want of the arts' examination, as it had prevented him from taking full rank. While he thought they should make the curriculum as easy as possible, yet he held that those who went in for dentistry should go in at the "strait gate" of an arts' examination.

Mr. Macleod's motion was then unanimously adopted, and it was agreed to send a copy of it to Professor Turner.

Mr. WILSON said that another important question requiring to be settled was that of registration. At present dental students could only register in London, and he thought it should be sufficient that they register in the medical register. It would allow the classes that they attended to count for the medical curriculum also. Otherwise they must enter themselves at the same time in both to do so. Then as regarded the curriculum required by the different licensing bodies, it would be an advantage if there was something like uniformity in them. They would require something more definite than merely saying one course of lectures on a cer-

tain subject. While in Edinburgh in the medical schools the winter and summer courses of lectures must consist of a definite number, in London, he understood, these courses did not have the same number at all, and that gave the London students an advantage. It would be much better, in giving the curriculum, to state the minimum number of lectures which would constitute the course of each subject.

The CHAIRMAN said that these were very important subjects. He had had a good deal of correspondence in regard to the registration. As to the lectures in London, they were not given every day as here, sometimes only twice a week. "A course of chemistry" might mean a course of chemistry in a school. With regard to registration, he did not see any difficulty in allowing the students to register in any city in which there were licensing centres. As to the curriculum being made more definite and uniform, these were things that might be considered.

Mr. CAMPBELL, Dundee, said he thought it would be very desirable for those dental students who expected some day to obtain the full membership, if the two grooves could be made to work in such a way that they could be got together more easily.

Mr. WILSON said that what he meant was that there was no reason for having a special dental students' register at all.

Mr. WILSON then read notes of a case he had met with since their last meeting. The patient (male, aged about 30) called on him complaining of severe neuralgic pain at the back of the right ear and temporal region. An examination of the mouth showed all the teeth on that side seemingly sound, the only peculiarity being that the upper wisdom tooth (of which only the grinding surface was visible) lay on a level with the neck of the second molar, and its lingual surface was in such close contact with the distal surface of the second molar, that he could not force a probe between them. He tried percussion without any result, but found that the tooth moved slightly in on the palate when considerable pressure was applied. Being of opinion that it was most probably the cause of the pain, and as it was from its position quite useless, he advised its extraction, which was at once carried out. On examining the tooth, the two buccal roots were found united by a large exostosis, the palatine root was wanting, and where it should have been attached, a large opening led into the interior of the crown, which was thoroughly scooped out, not by caries, the surface being quite hard and scarcely discoloured.

Standing out from the buccal portion of the cavity in high relief was the pulp, thoroughly calcified, only a small piece of the radical portion belonging to the palatine root remained, but the other two portions could be seen passing into their respective roots. Projecting from what was the floor of the cavity when *in situ* were two twigs of osteo-dentine and their anastomosis, evidently the remains of an abnormal process of the pulp, which had penetrated the dentine almost to its periphery. Whatever had caused the disappearance of the hard dentine had had little or no effect on the dark coloured osteo-dentine which had replaced the pulp. He passed round the tooth for inspection, and would like to know if any one present had met with anything like it.

A vote of thanks was then given to the Chairman, and the proceedings terminated.

Odontological Society of Great Britain.

THE usual monthly meeting was held at the Society's rooms, 40, Leicester Square, on Monday the 3rd inst., S. Lee Rymer, Esq., President, in the chair.

Mr. G. HOCKLEY showed a second right upper molar joined to the adjacent wisdom tooth. The patient had suffered for some time from neuralgic pains which appeared to be referable to the second molar, and on extracting it, which was effected without difficulty, the wisdom tooth came with it; the roots of the first named tooth were much exostosed.

Mr. ACKORY presented to the museum two specimens of unilateral syphilitic deformity of the central incisors which he had shown at a previous meeting, and which had since been carefully mounted by Mr. Weiss. He believed such cases to be very rare.

Mr. COLEMAN said he was not aware that cases of this kind were so very rare; certainly he had seen several, but he had not taken impressions of them. He exhibited a model showing two supernumerary incisors of distinctly syphilitic type, whilst the proper centrals, coming down within the dental arch, were well-formed. The patient presented other distinct evidences of syphilitic taint. What he took to be the supernumerary teeth had since been removed, and the others were being forced into their proper position.

He also showed a cast of another patient who had two supernumerary teeth in the central incisor region which closely resem-

bled syphilitic teeth, though they were not so. In this case the left central was in front of the lateral, and the right, which had not yet come down, could be felt in the same situation. The left supernumerary had been extracted, and the proper central transplanted into its alveolus. The same course would be pursued later on the right side.

Mr. GURNELL HAMMOND exhibited the baboon's tooth, which he had recently extracted at the Zoological Gardens. It was the first right upper molar. Mr. Hammond had great difficulty in forcing up the instrument and extracting the tooth on account of the great thickness and hardness of the alveolus. Having extracted the tooth he tried to perforate the antrum through the alveolus, but could not succeed in doing so; he therefore perforated the anterior wall with a trochar, and a quantity of matter escaped. The animal was at once relieved by the operation, and had got on very well since.

The SECRETARY then read a communication from Mr. Edwin Cox, L.D.S.Eng., formerly of Preston, Lancashire, but now settled at Auckland, New Zealand, giving the history of a case of cancer of the right superior maxilla which commenced with a discharge of thin fluid from the alveolus of the second molar, and ran for some months a very obscure course, puzzling Mr. Cox and several surgeons whom he induced the patient to consult. After lying dormant, as it were, for several years, it suddenly began to spread rapidly, and the patient died from hæmorrhage.

Mr. GADDES then read notes of the following case. A girl, aged 16, was sent by a general practitioner to the National Dental Hospital for advice respecting an abscess-like growth which bled frequently, and which was connected with the buccal aspect of the right first upper molar. Mr. Henri Weiss, who first saw the case, determined to remove the tooth and growth under the influence of nitrous oxide. Owing, however, to the very transient effects of the gas, only the tooth and the *bulk* of the tumour could be removed. A microscopic examination of this, which was about the size of a bean, showed it to be a round-celled sarcoma and very vascular. It was attached to the periosteum of the two buccal roots of the tooth, but the palatine root was free. The patient herself was in a low and anæmic condition.

Next day it was found that a large mass of granulations filled up the space recently occupied by the tooth, and three days later

this had considerably increased in size, so as to come in contact with the lower teeth on occlusion. Nitrous oxide and ether were then administered, and Mr. Gaddes removed the whole of the outer alveolar plate with the hyperplasia. On several subsequent days the granulating surfaces were cauterized with nitric acid, but in spite of this the tumour recurred with considerable rapidity, and gave rise to occasional hæmorrhage, and at the end of a fortnight it was evident that something more must be done. Gas and ether were therefore again administered, and the whole of the socket of the first molar, with the gum tissue around, nearly to the floor of the antrum, were gouged out, the second bicuspid and second molar not being interfered with. This had the desired effect; some rapidly growing granulations were touched with caustic potash, and periostitis of the second molar was relieved by opium fomentations. The wound healed soundly, and when last seen, four months after the operation, not only had there been no recurrence, but it was difficult to believe from the appearance of the part that so much of the bone had been removed.

Apart from the surgical interest of the case, Mr. Gaddes solicited the opinion of members as to whether the operations described should be recognised as being within the limits of dental surgery. The border-line between general and dental surgery was at present ill-defined. The text-books gave no assistance in solving the question, for while they dealt more or less fully with affections of the parts contiguous to the teeth, they rarely gave any opinion as to whether the treatment of a certain disease came within the scope of the general or of the special practitioner. For instance, with regard to diseases of the antrum; these might arise quite independently of any dental irritation, yet they were all treated of with about equal fulness, quite irrespective of their probable origin. The same might be said of tumours of the gums, &c. He suggested, therefore, that the Society might with much utility express some opinion as to what should be considered the limits of Dental Surgery. It was a subject which had not, so far as he knew, previously been discussed by the Society, and he believed that such an expression of opinion would be of great value as a rule of guidance to members.

Mr. HUTCHINSON asked the President whether an ethical question such as this was a proper one for the Society to discuss. He had always understood that their discussions were to be limited to scientific questions.

The PRESIDENT said he saw no reason why the Society should not discuss the question put forward by Mr. Gaddes, if it were so minded; indeed, he knew of no other body which was better qualified to do so.

Mr. F. HENRI WEISS said that a somewhat similar question had been raised in the discussion of a paper by Mr. Stocken last year; the right of dental practitioners to *prescribe* was then called in question, and their late President gave it as his opinion that "so long as there was any prospect of saving a tooth, dental practitioners were justified in using any means, constitutional or local, to this end." In this case, however, it was not a matter of saving the tooth with which the disease was connected, and its simple extraction would have done no good to the patient. The case looked, at first sight, a very simple one, and it was only after the first operation that they found they had to deal with a more serious matter. He was not prepared to say that had they at first known the exact nature of the case they would have acted as they had done, but having once taken it in hand they felt inclined to persevere. No doubt, had things gone wrong with the patient, they might have found themselves in a position of difficulty. The question before the Society was not, however, so much as to this particular case as to ascertain whether any decision could be arrived at as to what should be considered to be the limits of Dental Surgery.

Mr. S. J. HUTCHINSON said he was strongly of opinion that the dental license entitled its possessor only to practise dental surgery, and that if he wanted to practise oral surgery he should be fully qualified as a surgeon. He thought the admission of Mr. Weiss—that had anything gone wrong with the patient, those who took charge of her might have found themselves in difficulties—was very much to the point. He was himself an M.R.C.S., but practising simply as a dental surgeon, he always referred such cases to a general surgeon or a general hospital; they might need medical treatment, bandaging, or visiting at their own homes, and these were duties which he was not prepared to undertake.

The discussion was continued by Mr. STOCKEN, who thought that the duties of the dental practitioner should include the treatment, both local and constitutional, of all diseases *connected with* the teeth; by Mr. R. H. WOODHOUSE, who thought they would do well to confine their attention to the care of the dental tissues, since, besides the risk and trouble involved in the treatment of

such cases as that described by Mr. Gaddes, such practice would probably cause some ill-feeling between the dental and surgical professions; and by Mr. LAWRENCE READ, who thought the whole discussion a waste of time, since, whatever the decision might be, the probability was that practitioners would act according to their own ideas, and the Society could not assume to direct them how they should conduct their practices.

Mr. GADDES having replied, the PRESIDENT announced that at the next meeting a paper would be read by Mr. Joseph Steel on "The Connection between Mechanical Injury and Dental Caries." The meeting was then adjourned.

The Examinations for the Dental License sine Curriculo.

JUST before going to press we have been given to understand that the Council of the College of Surgeons in Ireland, on the motion of Dr. A. H. Jacob, the energetic editor of the *Medical Press and Circular*, has passed a resolution excluding from the examination for the Dental Diploma all candidates who cannot produce testimonials of character from two members, either of the British Dental Association, the Odontological Society, or the Association of Surgeons practising Dentistry, or from two of the Dental Licentiates of the College. We therefore feel at liberty to publish the following copy of the letter sent to the Irish College by the Business Committee of the British Dental Association, which has been forwarded to us by the Honorary Secretary. The action of the Council of the College of Surgeons in Ireland in investigating the character as well as the knowledge of the candidates for the Dental Diploma, is a concession to a widely held opinion, strongly expressed in the *Medical Press and Circular*, that sufficient pains were not taken by the College to have some guarantee as to the antecedents and more immediate surroundings of its Dental candidates. But we could have wished that Dr. Jacob's views could have been more fully carried out, for, unless selfishness step in, there are surely some who have already obtained the L.D.S.I. without any adequate examination into their professional character, who are likely to back up others as objectionable as themselves, to the annoyance of those more worthy practitioners who do their utmost to uphold the fair fame of the Irish Dental diploma.

BRITISH DENTAL ASSOCIATION,

40, LEICESTER SQUARE, W.C.

To the President and Council of the Royal College of Surgeons in Ireland.

GENTLEMEN,—The British Dental Association, incorporated for the purpose of promoting Dental education, and of supporting the spirit and provisions of the Dentists Act, in furtherance of these objects, beg respectfully to ask, through its Representative Board, your favourable consideration of the following proposals:—

A sufficient period, it is generally considered, has been given for those established practitioners who were precluded by circumstances over which they had but little control from complying with the terms of the curriculum, to present themselves for examination *sine curriculo*. It is fervently hoped, and indeed reasonably expected, that all future examinations will be conducted with the view of strictly maintaining an uniform and high standard of education, and without any reference to exceptional conditions whatever.

The time has now passed during which your College agreed to waive compliance with the curriculum as set forth in the Dental curriculum, agreed upon by the Committee of your representation, when Mr. McNamara was Chairman, and adopted by the Medical Council, the record of which is published in the Council's minutes, July 16, 1879.

We trust, therefore, that all future candidates for examination will, in respect to the extent and nature of the examination, be regarded in the same light as though they had complied with the terms of the curriculum, and it is hoped that some more sufficient guarantee of the professional character of applicants for examination than has hitherto been deemed needful, will also in future be secured.

In urging the adoption of these conditions, we are but asking for the observance of rules which have been strictly followed by the Royal College of Surgeons of England in respect to Dental examinations, and the strict observance of which by all the licensing bodies, we feel sure, is absolutely necessary to the maintenance of the educational value of their respective Licentiateships in Dental Surgery.

The very valuable power of removing from your Register the names of persons who advertise, we respectfully ask you to exercise in all cases of infringement of the rule, whether it be by

personal advertisement, or advertisement in an assumed name, or in the name of a predecessor or of a partner.

We beg to enclose for your inspection copies of Articles of Incorporation, the Bye Laws, a List of Members, and of the Executive of the Association.

We have the honour to remain, &c., &c.,

(Signed by the Members of the Business Committee.)*

MINOR NOTICES AND CRITICAL ABSTRACTS.

The Treatment of Teeth with dead or dying Pulps, and of Alveolar Abscess.

WE give below an abstract of a paper on this subject read before the Illinois State Dental Society by Dr. H. H. Townsend, and published in the January number of the *Missouri Dental Journal*. Dr. Townsend's treatment appears somewhat heroic, and we cannot share his implicit faith in aconite and iodine ; still he claims that it has stood the test of time, and has been crowned with success. The paper is certainly clearly expressed, and will, we have no doubt, interest our readers, if it does not convince them.

The great number of teeth that are now restored to comfort and usefulness, after disease or death of the pulp, or periostitis, which, but a few years ago were lost, little or no effort being made for their preservation, is certainly very gratifying evidence of progress. That there are still some obstinate cases which resist the most patient and persistent treatment, is evidence that something yet remains to be accomplished.

The first symptoms of alveolar abscess are a slight uneasiness in the tooth, and occasional slight pain, and a little tenderness upon pressure, followed by acute pain, and elongation and looseness of the tooth, which is so sore that the slightest pressure is unbearable. The gum over the affected tooth becomes swollen, dark red, and very painful. When pus has pierced the bone, fluctuation is easily felt by gently pressing upon the gum with the finger. In some cases there is considerable constitutional disturbance.

The principal causes of this disease are dead or dying pulps

* The above only reached us after the first part of the Journal had gone to press, and too late to be inserted in its proper place, after the Glasgow correspondence, at p. 155.—ED.

confined within the pulp chambers of the teeth ; dead, or partially dead roots, which nature is making an effort to expel ; and mechanical injuries. To which should be added as occasional causes ; the imperfect removal of pulps ; imperfectly filled canals ; filling the apical portions of canals with cotton ; and small canals left untouched. The severity of the disease is modified by the diathesis and health of the patient.

Pathologically, an alveolar abscess is quite similar to a whitlow upon the finger, the difference is principally that of location, both being due to periosteal inflammation.

The treatment of alveolar abscess will depend upon the cause, and the condition in which we find it. If occasioned by a dead root, which nature is trying to expel, the extraction of the root will usually be all the treatment required. If from a blow upon the tooth, or other mechanical injury, the pulp is still alive, and suppuration has not taken place, the inflammation may be arrested by preventing occlusion with the antagonizing tooth, and the frequent application to the gum around the affected tooth of the tinctures of aconite and iodine, two parts of the former to one of the latter. If pus has already formed, and the pulp still retains its vitality, every effort should be made to arrest the progress of the disease, as the pulp cannot long remain in a state of health if suppuration is allowed to go on ; particularly if the sac is near the apex of the root. Here we have a case analogous to the whitlow or felon referred to ; suppuration of a periosteal membrane. A felon freely opened as soon as pus is formed, usually requires little or no other treatment. The same is true of an abscess caused by mechanical injury, where the pulp is not diseased. It is rather heroic practice to cut through the gum and alveolus, but I think it is justifiable in such cases. I should, in addition to the opening, paint the gum with aconite and iodine, as there is always some congestion surrounding the suppurating tissue. Where an abscess is caused by a dead or dying pulp, we must first remove the cause. It frequently happens, however, that owing to the extreme soreness of the tooth, and the nervous condition of the patient, it is impossible to do more at the first sitting than to open the pulp chamber and afford vent to the pent-up gases, deferring extirpation and cleansing the root canals until the soreness subsides, which it usually does in a few days, especially if the aconite and iodine is applied to the gums. If the pulp is still too sensitive to admit of extirpation, I should devitalize it with arsenic, using for the purpose

not more than 1-250 part of a grain, combined with from 1-32 to 1-16 of a grain of morphia, with sufficient creasote to moisten the pellet of cotton, covering in all cases with a temporary filling of gutta percha. It is important that the surplus creasote should be absorbed before introducing the temporary filling, as otherwise it might be forced out, carrying with it some of the arsenic. Accidents have been caused in this way. The length of time which arsenic should be allowed to remain in a tooth varies in different cases; I think, however, it may safely be left until the pulp is entirely devitalized; this varying from a few hours to several weeks. As the last portions of the pulp die, some soreness is usually felt, which generally disappears in a day or two. No further irritation is experienced until mephitic gases are formed, when extirpation should be no longer delayed. Perhaps the best time for the removal of the pulp is when it is entirely dead and sloughing has taken place, as it then produces no irritation, is painless, and is more easily accomplished than at any other time. I know of no way of determining just when this has taken place, except by testing. Usually, I think it occurs soon after the soreness subsides, occasioned by death of the apical portions of the pulp. I certainly would not advise the removal of a pulp when only partially devitalized, as it is a very painful operation to the patient, and is liable to produce inflammation of the tissues beyond the foramen, which is often very difficult to control.

(The author here expresses at some length his strong opinion that the rubber dam, a good light, and well tempered instruments are essentials for the satisfactory extirpation of root canals.)

Perhaps the best instruments yet placed in the market for removing the pulps of teeth are the broaches with a single hook at the point. The temper of the steel bristles is certainly excellent, but I have never found any with a point well adapted to the purpose. The barbed broaches are only useful in large straight canals. They lack toughness of temper, the barbs are too long, and too far from the point. They can be improved by cutting off the points at the first barb, filing down to a small size, leaving only two barbs nearest the point, and these very short. I think if the steel bristles had two or three very short barbs near the point they would be superior to any instruments yet devised for pulp extirpation. Great care is necessary in these operations to avoid the danger of forcing any of the pulp debris, or the point of the instrument, or both, through the apical foramen. These nerve bristles referred to

should be used very cautiously, as their small size, smooth, round surface, and excellent spring temper, render them well adapted to follow small curved canals, and they pass through the foramina so easily in many cases, that the membrane is wounded before we are aware of it. If any one doubts this, let him take a recently extracted tooth, and try the experiment, and he will find that in many of the buccal roots of the upper molars, even, these instruments will readily pass through the foramina half an inch or more. How much more easily, then, will they pass through the palatine roots of the same teeth, and also the large straight canals of the incisors and cuspids. As accidents of this kind always produce more or less irritation, and as prevention is better than cure, it is well to explore root canals carefully. In many cases considerable advantage is gained by reaming out the canals, especially where the pulps can be removed only in fragments. A reamer will scrape off the particles adhering to the walls of the canals, which a broach or hook will not do. Glidden's reamers, while not all that could be desired, are very useful instruments, and have aided me many times. The reamers recently devised by Dr. Talbot are also very valuable, and although I have not been able to accomplish with them all that the inventor claims they will do, yet would not like to be without them. The canals in the incisors, cuspids, and bicuspid, are not usually difficult to cleanse or fill. Neither are those in the palatine roots of the superior, and the distal roots of the inferior molars. The buccal roots of the upper molars, being smaller and usually somewhat flattened and curved, the canals are often difficult to treat, and sometimes even to find. The mesial roots of the lower molars are also flattened, and the canals usually more or less contracted, resembling an hour-glass in shape—this contraction frequently resulting in two distinct canals. When this is the case, considerable difficulty is experienced in following them their entire length, and, perhaps, in some cases it is impossible to do so. The right and left exploring instruments, with long fine points, are valuable for finding these small canals. Frequently the canals in the buccal roots of the upper molars are contracted near the pulp chamber, and if they are reamed out at this point, can be easily followed throughout their entire length. For this purpose a three-sided broach, with a rather soft spring temper and a small round point, is often sufficient. Any reamer for this location must be short enough to allow its entire length between the open jaws, that the instrument may be used in the direction of the canals.

Glidden's reamers may also be used in the same way by cutting off to the desired length and moulding some sealing wax or modelling compound around the shaft for a handle. The canals should be thoroughly syringed with warm salt water after the pulps are removed. This is best done with the rubber dam still in position. After drying the cavities with spunk, I generally use fine tissue paper, cut in triangular pieces and rolled into fine points, for drying the canals. These are easily used in all except the small contracted canals. The process is completed with the warm-air cavity drier.

I do not usually fill the roots at the same sitting that the pulps are removed, but consider it safer practice to wait a few days, as some irritation may result from severing the pulp vessels. I prefer, therefore, to leave some cotton in the roots, moistened with carbolic acid or creasote to render it antiseptic, and fill temporarily with gutta percha. I fill roots with the white gutta percha, rolled out to the desired size with a warm knife. It is often necessary to cut off the extreme points to prevent carrying it through the foramen. For the small tortuous canals I use a solution of white gutta percha in chloroform. This, I find by experiments out of the mouth, can be carried with a fine bristle into surprisingly small canals. For some years I used this solution quite extensively, but the time required for hardening, the shrinkage, and the ease with which it is carried through the foramina in ordinary canals, are objections which do not exist in the use of solid gutta percha. Considerable difference of opinion exists as to the necessity of filling these small canals at all—my own opinion being that it is by far the safer way to fill all canals that can possibly be filled, even though they require reaming and enlarging for the purpose. I have many times removed fillings from abscessed teeth and found the larger canals filled, but the smaller ones left untouched. The fact that cleansing, treating and filling these, resulted in a complete cure, is some evidence at least that the neglected canals were the cause of the trouble. As an experiment, I have frequently filled the larger canals, leaving the very small ones to take care of themselves, filling the cavities temporarily, and after a few weeks removing the filling, and the offensive odour, which I have invariably found to be present, is sufficient evidence to my mind that such is not safe practice. I invariably fill all three canals in the upper molars. I do not claim that these have *all* been filled *throughout* their entire length. This, as we all know, would in many cases be an impossi-

bility. The theory, that if the *end* of the canal is perfectly sealed, the balance may be left unfilled, while theoretically correct, is, I think, objectionable in practice, as we can seldom, if ever, *know* that the foramen *is* entirely closed. If it *does* leak, the open canal becomes a reservoir for the accumulation of moisture, which soon decomposes, and the gases thus generated escaping through the leaky plug, become a source of irritation to the surrounding membrane.

(To be concluded.)

The "Lancet" again.

THE following appeared in the *Lancet* of April 1st. We leave our readers to judge for themselves how far the remarks which will be found at p. 135 of the March number of this journal, are capable of the interpretation which the editor of the *Lancet* seeks to give them, and whether it is not rather the *Lancet* which has "gone out of its way" to insult, not for the first time, a body of practitioners fully as well qualified for the performance of their special duties as is the class which the *Lancet* affects to represent:—

"Our attention has been directed to a magazine calling itself the JOURNAL OF THE BRITISH DENTAL ASSOCIATION, in which playful comment is made upon a letter from a medical man published in a recent number of the *Lancet*, giving the palliative remedies he has found useful in cases of common toothache. The magazine in question goes out of its way to hint that the *Lancet* can devote otherwise valuable space to the dental contributions of unqualified practitioners, which are of no special interest to the medical profession."

Annotations.

THE First Annual General Meeting of the lately founded Eastern Counties Dental Association will be held at Norwich on the 26th instant. The Business Meeting for confirming the bye-laws, elections of officers, &c., will take place at 12 o'clock, and a meeting for the discussion of papers, &c., will be held in the afternoon, to be followed by a dinner. Further particulars may be obtained on application to W. Stringfield, Esq., London Road, Lowestoft, the present *Hon. Sec.* We trust that the result of the meeting may be a large accession of members, and that before long we may have the pleasure of receiving the Eastern Counties Association as a member of our confederation.

IN the February number of *Le Progrès Dentaire*, the editor informs his readers that the "*Monthly Review of Dental Science*" is one of the most important and widely circulated of the English dental journals. Amongst the articles which have appeared in recent numbers of this excellent periodical, the following are mentioned as being worthy of notice:—"Reflected Neuralgia," by Mr. S. J. Hutchinson, an abstract of Dr. Sexton's paper on "Affections of the Ear arising from Diseases of the Teeth," Mr. Arthur Underwood on the "Antiseptic Treatment of Root Canals," Mr. Richardson on "Erosion of the Teeth, &c." The fact that these articles appeared in our journal nearly two years ago, gives this notice a very Rip-van-Winkleish flavour. Apparently our brother editor had just returned after a long leave of absence, and had not had time to post himself up in current events.

OUR French homologue, the Société Syndicale Odontologique de France, has this year followed our example and established a journal of its own. For the preceding two years the Society had arranged with the proprietors of the *Gazette Odontologique* for the publication of its official reports in that paper, in the management of which Dr. Mordaunt Stevens, a prominent member of the Society, took an active part. As Dr. Stevens finds himself no longer able to attend to these literary duties, the Council of the Society thought it best to have a journal of their own, and this they started in January with the title of the *Revue Odontologique*. We need hardly add that we wish it every success.

WE understand that another change has taken place in the management of the *British Journal of Dental Science*. Whilst we could not agree with many of the opinions expressed by the late editor, some of which greater experience of the circumstances of the profession would probably have induced him to modify, we readily admit that his brief reign was characterised by evidences of ability and enterprise, and we hope his services will not be altogether lost to the profession. The gentleman who has just accepted the editorship of the *British Journal of Dental Science*, will be the fourth who has occupied that position within the last two years.

WE have lately received the Second Annual Report of the Dental

Hospital of Exeter, and are pleased to see that it is flourishing. The number of patients treated during last year was 3,624, and the number of operations 5,129, viz., 3,446 extractions, 956 stoppings, and 727 miscellaneous cases. The financial condition of the Institution was also very satisfactory.

THE following formula for preparing *Iodised Cotton wool* is taken from the *Journal of the Dutch Society for the Advancement of Pharmacy*. It would, it appears to us, be useful in Dental Surgery, since it would not only be a saving in trouble over the present plan of saturating the wool with the tincture, but also more uniform in strength:—"Gossypium Cum Iodo. Take of iodine 1 part; purified cotton wool 12 parts. Wrap the iodine in filter paper, and place this at the bottom of a wide-mouthed bottle; then introduce the cotton and insert the stopper. Let the bottle stand in a moderately warm place until the cotton appears uniformly coloured."

Correspondence.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I have forwarded to the Editor of the *Missouri Dental Journal*, a copy of Mr. Tomes' Address on Dental Education, and of the following letter, not in reply to, but referring to a most extraordinary article, headed "Dental Reform; from an English Correspondent," which appeared in the January number of that Journal. As your Journal is likely to reach the North of England before the *Missouri Journal* in which my letter may appear, your insertion of it may enable the "English Correspondent" to have an earlier opportunity of knowing that his very tortuous reasoning has been noticed here, than he would have, had he to wait the delivery of the American periodical.

I am, Sir, yours, &c.,

J. S. TURNER.

TO THE EDITOR OF THE "MISSOURI DENTAL JOURNAL."

"DEAR SIR,—In the letter of your English correspondent appearing in your January issue, there are one or two statements

which require counter statements from one of those whose motives are so unceremoniously impugned.

"As your correspondent clearly ranges himself with such as are 'only fitted to elevate dentistry because they know how to practise it,' he might consider me presumptuous were I (one of the incompetents) to claim such a position for myself, and seek to discuss the question as his equal. I will, therefore, leave him all his superior knowledge and skill to himself, and confine my observations to the method of his argument rather than try to combat that which he seeks to prove.

"Your correspondent says that the dental reformers are broken up into two parties, and assumes that the *British Journal of Dental Science* represents one party, and that the *Journal of the British Dental Association* represents the other.

"Now, Sir, there may be any number of unorganized parties in the profession (if one can conceive such an anomaly), but I only know of one party which is organized and incorporated, and which publishes a list of its members and an annual balance sheet—that is, the British Dental Association, and it is represented by the Journal of the Association. The other journals published in this country embody the opinions of single editors—one is issued to advertise the goods of the proprietors, and the other is a publishing venture, and is written for sale and profit rather than for the maintenance of any special line of conduct.

"To the *British Journal of Dental Science* your correspondent goes for arguments against what he is pleased to call the other party, *i.e.*, the authors and supporters of the Dentists Act, and by manipulating some random expressions of the late editor (a gentleman, by the way, who never was nor is ever likely to be a dentist, who knew little or nothing of dental politics when he became editor of that journal, and who seems to have learned but little during his short editorial career), he seems to cite an authority as if he had discovered a new argument against the views of the British Dental Association.

"This reminds me of the American youths who passed the night exchanging clothes, and left off in the morning each a gainer of two dollars. It is difficult to recognise the material progress of the juvenile merchants, notwithstanding the debtor and creditor accounts, and it is as difficult to find out what your correspondent has added to the enlightenment of the profession by his quotations from the *British Journal of Dental Science*.

"Your correspondent says that 'certain dentists got up the Dentists' Register,' and that 'the expenses were to a large extent borne by a certain few in London,' &c., &c. The history of the Dental Reform Movement has been written, and the accounts of the Dental Reform Committee have been published, as also a list of the subscribers to the Dental Reform Fund, and if your correspondent can from any or all of these sources prove his assertion about either the getting up or paying for the Dentists' Register in the invidious sense in which he puts it, or indeed in any sense whatever, then I say that for 'ways that are dark,' the 'Heathen Chinees' is nowhere.

"In opening a sentence, your correspondent makes an assumption with a boldness which is only equalled by the grossness of its nature. He says, 'as self-interest is at the bottom of the reformer's work,' &c., &c.

"As the assumption of superiority in being able to 'show how dentistry is to be practised,' set your correspondent above me in discussing the politics of the profession—so does this assumption of purity of motive for himself, by imputing the meanest of all motives to those whom he criticises, prevent me from approaching one so pure while I am steeped in self-interest.

"Yet another assertion is that referring to a circular sent out by the advertising agent of the Journal of the Association in which a certain expression was used by that gentleman in describing the journal as an advertising medium. This circular was *faute de mieux* taken hold of and ridiculed by the editor of the *British Journal of Dental Science*. In reproducing this bit of editorial padding, your correspondent says that this circular was issued 'from the office of the *Journal of the British Dental Association*.' I have already said that it was issued by the advertising agent, and although the same printer who prints the journal may have been employed by the agent to print the circular in question, it was no more issued from the office of the Journal of the Association, or with the authority of the responsible staff, than was 'the letter of your correspondent.

"I think, Sir, that the question of Dental education is not to be helped forward by the assumption of superiority, either in professional skill and purity of motive, or by rash and groundless assertions being used as foundations for misleading arguments. Rather will I ask you to read the enclosed pamphlet at your

leisure, and thus leave the matter with confidence to your decision :

"I remain, dear Sir, yours truly,

"JAMES SMITH TURNER,

"*Hon. Sec. British Dental Association.*"

Vacancies.

UNIVERSITY COLLEGE, LIVERPOOL : Lecturer on Dental Metallurgy wanted. Applications to be made before April 25th to the Dean, at the Medical School, Dover Street, Liverpool.

NATIONAL DENTAL HOSPITAL, Great Portland Street, London, W. : House Surgeon wanted ; must possess L.D.S. diploma. Applications to be made to the Secretary on or before April 26th.

Contributions are acknowledged with thanks from Messrs. J. Stirling, L.D.S., Ayr. ; Stephen Hoole, L.D.S., London ; W. J. Milles, F.R.C.S. London ; A. S. Underwood, M.R.C.S., London ; Geo. Beavis, L.D.S., Newport, Mon. ; &c.

Books and Papers received.

Philadelphia Medical Times ; Ohio State Journal of Dental Science ; Missouri Dental Journal ; L'Odontologia ; British Journal of Dental Science ; Revue Odontologique ; Southern Dental Journal ; Lancet ; British Medical Journal ; Le Progrès Dentaire ; Transactions of Odonto-Chirurgical Society ; London Medical Record ; Birmingham Medical Review ; Dental Register, &c.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION

A
MONTHLY REVIEW OF DENTAL SURGERY

No. V.

MAY 15, 1882.

VOL. III.

BRANCHES.

THE report of the Eastern Counties meeting indirectly suggests that some little space may be profitably devoted to the consideration of the relations of Branches of the Association to the parent society. The 27th Article of Association requires that Branches shall be formed by Members of the Association, and bye-law (29) requires that the number of members sufficient for each such purpose shall not be less than twenty.

The rules governing the admission to the membership of a Branch must not be below in stringency those required by the Association. For under bye-law (2) the Council of a recognised Branch can elect to the membership of the parent Association. But the direct converse will not hold good, for the membership of the Association does not give an indefeasible title to the membership of a Branch. A Branch cannot take from the conditions of candidature as specified in bye-law (1) of the Association, but if it is thought desirable, for the purpose of meeting local circumstances additions may be made to the conditions of candidature

for the Branch. To secure uniform consistency of action between the Association and its Branches, it is necessary that a Branch should be formally recognised by the Association, for the reasons stated in bye-law (31). When fully constituted by the completing act of recognition a Branch is empowered not only to elect Members to the general body, but also under bye-law (18), to nominate for a seat on the Representative Board thereof Members resident in towns or districts fully represented by the Branch.

Subject to the observance of the principles by which each Member of the Association is bound, the action of a Branch is unfettered by, and indeed is independent of, the parent Association; which in its turn is bound by no pecuniary or other obligation incurred by a Branch, excepting, as already stated, in the case of election of Members and the nomination of representatives.

On the careful perusal of the Memorandum, Articles, and Bye-laws of the Association it will be seen that the Branches have as great freedom of action and independence in the conduct of their business as is compatible with their being Branches of an incorporated body.

In conclusion, the Members may be reminded that the Memorandum of Association is unalterable, that the Articles of Association can be altered only with the assent of the Board of Trade, and that the Bye-laws can be altered at an Annual Meeting only, and then the alteration must strictly conform to the provisions embodied in the Memorandum and Articles of Association. And, furthermore that this conformity in the Bye-laws is binding equally upon the Association and upon its Branches.

The Limits of Dental Surgery.

AT the April meeting of the Odontological Society a discussion took place on the above subject. A patient applied at the National Dental Hospital suffering from a small tumour of the jaw. After some treatment which failed to check the growth, the patient was placed under the influence of an anæsthetic, and an operation for the removal of the tumour was performed by Mr. Thomas Gaddes, L.D.S., the dental surgeon in charge of the patient. After describing the scientific details of the case, Mr. Gaddes propounded to the Society a question as to the Limits of Dental Surgery, and asked whether such an operation came within its scope. At the outset of the discussion a Member objected that this question, being one of an ethical character, could not be dealt with by the Society, but he was over-ruled by the President. We think it is to be regretted, not so much that the discussion was permitted, as that the question was allowed to be brought forward in the first instance. The President naturally felt reluctant to prevent a debate taking place on a case which had been read to the Society. We trust, however, that in future, Presidents may be spared an invidious duty and that the Council will enforce the salutary unwritten rule which excludes from the Society's proceedings contributions dealing either with the politics or ethics of the profession. There seems now less reason for the violation of this rule, since the establishment of our Association, and Mr. Gaddes' question is just one of those which the Association is eminently fitted to debate and decide.

We venture to think, however, that although Mr. Gaddes is in doubt, he will find very few practitioners who are in any way at a loss to recognize the well-marked boundaries of Dental Surgery, or at least there can be few who will go so far as to include the removal of a tumour from the jaw in our department of practice. It was suggested by another Member of the Society, that the performance of such operations by practitioners qualified only as dentists, would

probably lead to ill-feeling on the part of the medical profession. We think this is very probable. We do not for a moment suppose that the medical profession would grudge the small gain which a dentist might occasionally find from the performance of a surgical operation; but the leaders of the medical profession and medical legislators would, nevertheless, certainly resent, and probably with effect, the usurpation of surgical ^{practice} ~~by dentists~~. No doubt many dental surgeons have not only the knowledge, but also the skill necessary to safely perform such operations, and it might be alleged in the same way by advocates of unrestricted practice, that this knowledge is possessed by many who practise upon the public while possessing no diploma whatsoever. Law is, however, made for the protection of the public, and unless legal restrictions are jealously guarded, abuses must occur and the public must often surely suffer. In addition to the inexpediency on these grounds of the course which Mr. Gaddes thought fit to take, we consider that the grave responsibility involved in such a course is enough to deter the profession from following his example. In the first place there is always a danger, although of course remote in trivial operations, that a fatal issue may result, and in that case, as the dental licentiate would be unable to give the usual certificate, an inquest would be held, and possibly a verdict of manslaughter returned against the operator.

In the second place, in the event of the operation turning out badly, the practitioner would lay himself open to an action for *malpraxis*, an occurrence not at all unprecedented even in the experience of eminent surgeons, in the case of ungrateful patients. Under such circumstances the commonly accepted limits of dental practice must necessarily prejudice the defendant, who would be lucky if he escaped being mulcted in heavy damages. These and many other considerations which might be adduced may surely suffice to restrain ~~Dental Surgeons~~ from venturing upon any such dangerous ground as is involved in trespassing beyond the well-known limits of their speciality.

The Fatal Accident at Preston.

A REPORT of the inquest upon a sad case of death resulting from the impaction of a tooth in the larynx, into which it had slipped during the removal of several teeth under nitrous oxide, is given at another page. Other instances of a similar accident are upon record; thus in the *British Medical Journal* for August 30th, 1879, several cases are quoted from Dr. Poulet's Treatise upon Foreign Bodies in Surgery, two of which proved fatal; and it is noteworthy that in these latter the patients had been rendered insensible with nitrous oxide.

The occasion of the paragraph in the *British Medical Journal* was the occurrence of a death in Paris, where the patient, a child aged seven, who was having a molar tooth extracted, struggled violently, and the tooth slipped from the forceps into the larynx. The patient died on the spot of suffocation. M. Rigaud also saw a child upon whom he was operating for hare-lip, die under his hands. The necropsy revealed a milk tooth sticking in the rima glottidis, and completely obstructing the opening.

As is pointed out by a correspondent, it behoves every practitioner to carefully consider in what way such an accident has happened, in order to guard, as far as possible, against its recurrence. With a conscious patient such an accident is less likely to happen, and if it does happen, is far less likely to be attended with disastrous results, while the lividity which often attends anaesthesia under nitrous oxide, may, perhaps for a few moments, delay the recognition of the nature of the case.

Similar accidents have, however, been sufficiently numerous to render it imperative upon those who have charge of an unconscious patient, whilst guarding against them with every care, always to bear in mind the possibility of being compelled to have recourse to laryngotomy or tracheotomy as a last resource against impending suffocation.

In some instances teeth have passed down into the bronchi, and then set up inflammatory mischief, terminated by the tooth being coughed up again, even after the lapse of considerable time. Should there be reason to suppose that this accident has happened, it need hardly be urged that no attempt should be made to promote its immediate return without everything being in readiness for operation, lest, by its becoming impacted in the larynx, a condition of

comparatively remote danger be converted instantly into one of urgent peril.

ASSOCIATION INTELLIGENCE.

Midland Counties Branch.

THE Annual Meeting of the Midland Counties Branch, was held on Wednesday, 26th ult., in Leeds. By the courtesy of the Council, the business proceedings took place in the theatre of the Leeds School of Medicine. At eleven o'clock the Council meeting was held, and this was followed at noon by the business meeting, at which Mr. H. Champion, M.R.C.S., the retiring President, occupied the Chair. There was a good attendance, including the following:—Messrs. J. Smith Turner, London; C. Spence Bate, Plymouth; Dr. Walker, London; Dr. W. H. Waite, Liverpool (Secretary); R. E. Stewart, Liverpool; W. H. Nicol, Leeds; S. Wormald, Stockport; Thomas Murphy, Bolton; Isaac Renshaw, Rochdale; D. A. Wormald, Bury; G. Martin, Ilkley; William Taylor, Batley; A. Wittell, Leeds; C. Schnehage, Gildersome; G. Tracy Simpson, Leeds; J. A. Wilson, Bangor; G. D. Hawkin Ambler, Leeds; A. H. Bairstow, Harrogate; A. W. White, Bramley; Joseph Hick, Bradford; John Dacre, Leeds; T. S. Carter, Leeds; George Brunton, Leeds; J. S. Crapper, Hanley; Dr. Jacob, Leeds; Robert Smaites, Whitby; G. H. Crowther, Wakefield; T. E. King, York; W. Glaisby, York; E. J. Ladmore, Leeds; J. H. Carter, jun., Leeds; J. M. Nicol, Leeds; W. Shillinglaw, Birkenhead; E. H. Williams, Manchester; T. Buckley, Hollinwood; T. Dilcock, Liverpool; J. G. Roberts, Liverpool; L. Matheson, Manchester; G. Frost, Pendleton; H. Wood, Todmorden, &c.

On the motion of Mr. CRAPPER, it was agreed that the minutes of the previous meeting should be taken as read.

Mr. S. WORMALD (Treasurer) at the request of the President, then described the financial condition of the Branch. He said their finances must of necessity be in a very satisfactory condition, because their expenses were very small. Their meeting at Liverpool only cost £8 3s., and if the subscriptions were all paid up, and they would be very shortly, the Treasurer would have in hand something like £4 or £5, after paying the expenses of the present

meeting. Their finances were therefore in a very satisfactory condition, and he hoped that in a short time, if their meetings continued to be held at such small expense, they would be able to hand over to the parent association a handsome sum.

The PRESIDENT said the next business was the election of officers. The Council had nominated the President and Vice-President for the ensuing year.

The SECRETARY said that at the last meeting of the Council, in November, it was decided to nominate Mr. R. E. Stewart, as President, and Mr. W. H. Nicol, as Vice-President for the ensuing year. He also explained that it was necessary that the election of all the officers should be by ballot.

The ballot box having passed round, Mr. Stewart and Mr. Nicol were declared unanimously elected.

Mr. BRUNTON then proposed the re-election of Dr. Waite as Secretary, and this, on being seconded by Mr. CRAPPER, was also unanimously agreed to.

Mr. Wormald was similarly re-elected Treasurer, on the motion of Mr. E. H. WILLIAMS.

The PRESIDENT said the next duty of the meeting was to elect three members of Council, three of whom retired annually.

A ballot having taken place, the result was declared to be a majority of votes for Messrs. H. Campion, Mr. G. Brunton, and Mr. Crapper.

The PRESIDENT asked for a suggestion as to the next place of meeting.

The SECRETARY said this matter had been discussed at the meeting of the Council. An invitation had been given to the Council by a member who resided at Shrewsbury, and the Council had decided to recommend that the next meeting should take place at Shrewsbury. He begged to propose the adoption of that recommendation.

Mr. SHILLINGLAW seconded the motion, which was agreed to.

The PRESIDENT then said: It is customary for the President before he retires to say a few words as to what has taken place during his term of office. Much as I regret trespassing on your valuable time to-day, for I cannot but fear that the short retrospect of the chief events of the past year which my limited time allows me to bring before your notice, may prove tedious to many of you who are probably as well, or even better acquainted than I am with what has taken place since our last meeting, still I cannot

retire from the position which I have held during the past two years without detaining you for a few moments, were it only again to thank you for the great confidence and consideration I have received from you all during this my second term of office. Would that I could look back upon my past actions with the same amount of pleasure, for memory recalls many good intentions unfulfilled and work inefficiently performed; but in the midst of these discouragements there is the pleasant and ever sustaining thought of the generous forbearance with which I know you will view my many shortcomings.

Of the events of the past year there is not much specially relating to our Branch for me to dwell upon, but still there are a few points which I think are worthy of notice, and the first which naturally claims our attention is our last annual meeting at Liverpool. I am sure you will agree with me in thinking that it was a very successful one; about forty members and associates took part in the proceedings, and although some of the papers did not elicit as active a discussion as the interest of the subjects and the ability with which they were treated deserved, still there was sufficient to show that your Society has before it a large sphere of usefulness in this direction. At the same time, I would venture to remind you that this part of our work requires the co-operation of the many and not of the few, and to express a hope that as each year comes round a larger number of members will be willing to respond to the invitation of our Secretary, and give us the benefit of their experiences and investigations, both in papers and casual communications. We are fortunate in having a most active and efficient Secretary, but his duties are sufficiently onerous without the additional anxiety of having to seek for papers for each annual meeting. The hearty welcome which we received at Liverpool must still be fresh in your memories, and whilst mentioning it, I must not forget to notice the kind support we received from the members of the Liverpool Medical Society, as shewn not only by their generously placing the rooms of their Institution at our service, but also by so many of them joining our social gathering in the evening.

Considering the time our Branch has been formed, I think the progress we have made has been such as to afford us much encouragement, and also to stimulate us to renewed exertions for the future. At present it consists of fifty-four members and five associates, and I have no doubt as time goes on, and the members of

our profession in other places become alive to the benefits to be derived from membership, our numbers will steadily increase ; and I think there is no better means for making its benefits more generally known than the plan which has brought us here to-day, I mean the holding our meetings each year in a different town in the district. Our Liverpool meeting led to a large addition to the number of our members in that locality, and I have no doubt but that our meeting here to-day will be followed by a similar happy result.

That the success which has attended our previous meetings, and that the efforts which the Branch has made to assist in carrying out the objects for which the British Dental Association was formed, have been noticed and duly appreciated, we have lately had a most gratifying proof in the fact of Liverpool having been chosen as the place for the first meeting of the Association in the provinces. Of this, I think, our Branch may be justly proud, and I feel no hesitation in urging on all its members the necessity of their using every effort, not only to be present themselves at the meeting in August next, but also the desirability of their persuading all their friends, who are not already members, to join the Association without delay, so as to give a worthy reception to the many eminent members of our profession who are expected to be present not only from London but from all parts of England and Scotland. The Medical Society of Liverpool has again kindly promised the use of its rooms, and I cannot but think that the large and influential meeting which will there assemble will do much to improve the status of our speciality, and to increase the kindly feeling which already exists between the Licentiates in Dentistry and the great body of general practitioners in that city.

Our Secretary and Treasurer attended the Meeting of the Western Counties' Society, and had the pleasure of congratulating them on their having at last become a Branch of the Association, and they would strongly impress on us all the desirability of our being present at the meeting of that Branch which will be held this summer under the presidency of Richard Rogers, Esq., at Cheltenham. I think the suggestion is one worthy of our consideration, knowing as we do the pleasure that it gives and the benefits that result from the mutual support of each other by the different Branches, and I would venture to remind you that the President and President-Elect of the Western Branch were two of the few

friends who kindly supported us by their presence at our first meeting in Manchester.

Whilst writing this I have received notice of a meeting to be held for the inauguration of an association for the Eastern Counties, and also a kind invitation from the President-Elect to be present on that occasion. Unfortunately they have arranged to hold their meeting to-day and we are, therefore, none of us able to support them by our presence, but I am sure you will unite with me in wishing them a successful meeting and a long and useful career, and join in the hope that ere they hold their second Annual Meeting we may have the pleasure of knowing that they also have become a Branch of our Association.

Shortly before our last Council Meeting some papers were sent to several members of the Council containing advertisements from Dentists living in our district and holding Scotch diplomas. On consideration two of these were thought to be of such a nature as to require some notice to be taken of them and your Secretary was requested to forward the papers and also to write to the licensing bodies from which the advertisers obtained their diplomas, calling attention to them; this has been done with a very satisfactory result, as in a letter received from the Secretary of the Faculty of Physicians and Surgeons of Glasgow, he says, "I have ascertained the facts respecting the two cases of advertising to which you drew my attention. In both cases the licentiates appear to have proceeded on a misunderstanding of the rule prohibiting advertising, to which rule they have engaged to conform."

I mention this with much pleasure as it shews that your council is fully alive to its duties and responsibilities in looking after the interests of the profession in its own immediate district, and I think we may hope the knowledge that there is an active body keeping watch over their action will have a beneficial effect not only on the licentiates, but also on the licensing bodies themselves. As a sequence to this your Secretary took upon himself the responsibility of calling the attention of the Representative Board at its last meeting to the existing mode of admitting candidates to examination by some of the licensing bodies, urging that an effort should be made to induce them to institute a more searching inquiry into the character as well as the knowledge of candidates for the Dental Diploma. It is much to be regretted that illness prevented his attending the meeting and deprived the subject of the clear explanation and powerful persuasion which we all know it would

have derived from his personal presence. His letter, however, elicited an active discussion, and I am glad to be able to tell you the matter has been taken in hand by those whose position and influence are such as to command respect, and we have therefore every reason to hope for an improvement in this particular.

Since the above was written, the Journal for this month has been published, and you will probably all have seen in it the letter of the Secretary of the Association to the Council of the Royal College of Surgeons in Ireland, and to the Council of the Faculty of Physicians and Surgeons of Glasgow, and will join in the wish expressed by the Editor, that Dr. Jacob's views could have been more fully carried out in the concessions which have been made by the College of Surgeons in Ireland in this direction. Although this subject was put with equal force in the letter to the Faculty of Physicians and Surgeons of Glasgow, the Council appears not to have noticed it in the letter which Mr. Turner received from their Secretary. Our present position illustrates well what may be accomplished by patience and perseverance under the greatest difficulties. In the Secretary of our Association we have the right man in the right place, and this remark is specially applicable to the present occasion, since we have the pleasure of welcoming him amongst us to-day, and I doubt not that, if questioned, he would speak as cheerfully of this as he has of many former troubles, and tell us that all that is wanted in addition to the above-mentioned virtues to enable him to bring this and other difficulties to a satisfactory termination, is the moral, as well as pecuniary, support which would be gained by every member of the profession joining the Association.

There is one other important, I might say the most important, event of the year to be mentioned, but the time at our disposal to-day will not allow me to do more than just allude to it—I refer to the meeting of the International Medical Congress in London in August last. That one of the Sections of that memorable Congress should have been devoted to the subject of diseases of the teeth is a matter for congratulation, as it shows not only that the majority of medical and surgical practitioners are becoming alive to the important influence which these organs exercise on the general economy of health, but also their willingness that Dentistry should be fully recognised as a branch of the healing art and it only remains now for us to show by our professional conduct and by the devotion of our best energies to the advance-

ment of our speciality, that we are deserving of this honourable position.

Last words are generally supposed to leave the most permanent impressions, and I have therefore left to this portion of my remarks the notice of our finances, which, I regret to say, are by no means as satisfactory as they ought to be. Our Treasurer complains of the number of subscriptions still unpaid, and hopes that those members who have not already done so, will avail themselves of the present opportunity—not only for easing their own pockets, but also for relieving his mind from the anxieties which must necessarily result from an absence of “the needful” for meeting the current expenses of the Society.

In thus taking a glance at the working of our Branch, the question naturally arises, is it fulfilling the objects for which it was formed? To this, I think, we may fairly answer yes. That its sphere of usefulness may, however, be increased under the direction of a President of more administrative ability, and one who is able to devote more time and energy to the work than I have been able to do, I am freely willing to admit, and whilst thanking you for your kind attention, allow me to express a hope that this, our third annual meeting, may be as successful and agreeable as those which have preceded it.

Mr. RENSHAW said he had a very pleasing duty to perform, namely, to propose a vote of thanks to the retiring officers. He had seen how those officers had performed their duties, and it was a matter of great pleasure to him to propose this motion.

Mr. BUCKLEY said he had pleasure in seconding the motion.

The motion was carried with cordiality.

Mr. W. H. NICOL said he wished to make some observations with reference to the admission of the whole county of Yorkshire into membership. At present the Branch only extended to the West Riding, and several members from York having entered, he wished to move that the Branch should be extended to the whole of the county.

Mr. CRAPPER seconded the motion and it was unanimously agreed to.

Mr. STEWART said the meeting ought to accord a special vote of thanks to the President for his very able address, and he might add that it was with very great reluctance they allowed him thus to retire. He accordingly moved a vote of thanks to him.

Mr. D. A. WORMALD seconded the motion. He hoped that

Mr. Campion would be able to look back with pleasure and interest to his period of office, and he also expressed a wish that he might continue to be a member of the Council for many years to come.

The SECRETARY said he claimed to know more about the value of Mr. Campion's services than anyone present, and were it not that his services would be retained by his election to the Council, and also that he was President-Elect of the parent society, his retirement from office would be a great calamity to the Branch. He supported the proposition.

The motion was heartily agreed to.

The PRESIDENT said he could only thank them sincerely for the kindness they had shewn him. He had been reluctant to accept the office of President owing to his numerous engagements, but their Secretary was a man of enormous perseverance and patience, and he gave him no rest until he consented. It would give him great pleasure to continue his interest in the Branch in the future.

The members then separated for luncheon.

The members re-assembled at 2 p.m., when Mr. Stewart, the newly elected President, took the chair, and delivered his Inaugural Address. Papers were then read by Messrs. Murphy, Nicol, and Crapper. Mr. Carter read the paper on "The Increasing Degeneration of the Human Teeth," which appears at p. 209. Mr. Brunton read a very practical paper on "The Conservation of Children's Teeth," and Mr. Richardson's paper on "The Second Fall of Woman," concluded a very interesting meeting, a full report of which will appear in our next issue,

THE DINNER.

In the evening the Members of the Association dined together at the Great Northern Railway Station Hotel, the President (Mr. R. E. Stewart, Liverpool) in the chair. The following guests were present:—Mr. W. N. Price, President of the Leeds School of Medicine; Dr. T. Clifford Allbutt; Dr. Eddison; Dr. Charton; Dr. Hellice; Mr. J. Horsfall; Mr. E. Atkinson; Mr. T. Scattergood; Mr. E. Robinson; Mr. R. P. Oglesby; Mr. A. F. McGill; Mr. H. B. Hewetson; Mr. A. W. M. Robson; and Mr. C. J. Wright, Members of the Council of the Leeds School of Medicine;

Mr. C. Spence Bate, F.R.S., Plymouth; Mr. J. Smith Turner, London; and Dr. Joseph Walker, London, &c.

After dinner the Chairman proposed the toast of "The Queen and the Royal Family," which was cordially received.

Mr. W. H. NICOL (the Vice-President) proposed "The President of the Branch." He remarked that Mr. Stewart had been connected with the Association from the commencement, and had been one of their most active and energetic members. Noticing the visit of the Association to Liverpool, he referred to the admirable arrangements at Liverpool for the instruction of dental students, and said he believed it would not be long before Leeds would follow the example of Liverpool, Edinburgh, and other places in establishing a course of dental instruction for their pupils.

The PRESIDENT acknowledged the toast: he said he had been connected with the dental profession since 1843, and he assured them that it was a very proud day for him to be associated with a brotherhood like theirs. He hoped that they would follow the example of the medical societies in having a president connected with the town where the Association met.

Mr. T. S. CARTER proposed "The President and Council of the Leeds School of Medicine." He said they had great cause for congratulation at the hearty support which the Members of the Council of the Leeds School of Medicine had given them by their presence that night, and he might say that not a single invitation was declined. The Council thus showed their sympathy with the object of the Association to raise the tone of the dental profession, and to promote that *esprit de corps* which formed such a pleasing feature of the medical profession.

Mr. W. N. PRICE (the President of the Medical School) acknowledged the courtesy which prompted the Association to desire that the Council of the Leeds School of Medicine should be represented there that night, and thanked Mr. Carter for the very kind way in which he had proposed the toast. Mr. Carter had referred to the sympathy which existed between the medical profession and theirs, and he (Mr. Price) thought he had hit upon the right cause of that sympathy—a cause which was very evident in their meeting that day, at which he had the pleasure of attending, and that idea was the desire which they evinced to raise their profession in a scientific point of view—to take it out, as it were, of a mere mechanical art and make it a scientific and open profession. The

medical profession sympathised with them, also, in their evident desire to educate the younger members of their profession in the most scientific manner possible. What they might be able to do as a medical council and as a school he could not say just now, but they desired certainly to assist them to the utmost of their power.

Dr. EDDISON also responded. He said Mr. Price had expressed what they all felt, and that was a very real sympathy with the efforts which were being made to improve the education of dentists. He did not mean by that, that dentists did not know their work thoroughly well before, but they desired to systematise the education and make it very much upon the same footing that medical education had been hitherto. What they wanted to see was general unanimity about the method of education, and some general agreement as to what was necessary, and that was what he hoped they would see. He hoped that at the medical school they might before long begin to see some daylight in the scheme that Mr. Price had alluded to. He joined with Mr. Price in the wish that something might be done, and they looked to the dental profession to show them exactly how their help might be given.

Mr. J. HORSFALL proposed "The Officers of the British Dental Association and Branches." He said he noticed that almost all their guests were members of an association like their own—the British Medical Association. They could not exactly call the Dental Association a child of theirs, but it had happily adopted their lines, and they might, at any rate, call it a sister association. As the result of their experience in the Medical Association, they found that bitterness and jealousy were swept away, acquaintances were made and friendships, often life-long, were established. This might be the result of the Dental Association too.

Mr. C. SPENCE BATE (Plymouth) replied on behalf of the Western Counties Association. He said the parent society was, no doubt, doing a good work, which the branches could never have done. It was desirable that branches should be formed, and, in his part of the country, they concocted what had grown into the Western Counties Branch, which now extended as far up as Hereford. Thus they became acquainted with men whom they never heard of before. But the Association was doing more good than that; they invited all the members of the profession to join; they agreed to forget old grievances; they said nothing about their having advertised before if they promised never to advertise

again, and he believed that in the Western Counties they had kept very well to their promises. They allowed men to join who had got the Irish diploma. He was in favour of it. He said that every man should take what diploma he could; it was better to have that than nothing, therefore let him take it, and then come and join them. They intended to introduce at their meetings clinical operations. He went the other day to the Medical Congress, and saw work done there that he did not think could be done. He went home and tried to emulate it, and in six months he had brought his work forward more than he had done in the six years previously.

Dr. JOSEPH WALKER (London) also responded. He said they wanted the help of the members of the Association to make their Journal the first literary work on dental surgery in England. It was only by united effort that they could make their Journal what it ought to be; they worked hard for it in town, and they looked for the co-operation of those in the provinces.

Mr. J. SMITH TURNER (London) also acknowledged the toast. Speaking of the Dental Association he said the more branches it had the stronger it would become, because it was really an association of branches. True, they had had two meetings in London, but they had the second meeting because the Medical Congress assembled in London at the time when, according to the rules, they ought to have their general meeting, and they thought it would give increased interest to the occasion if they made their annual meeting, with the exception of its business objects, merge as much as possible into the dental section of the Medical Congress. He thought those who were there would believe that they entirely succeeded.

Mr. G. BRUNTON proposed "The Leeds Medical Charities." He said these charities were well known not only in Leeds, but all round the district. In connection with them, it was very satisfactory to find that they had a Medical School, and teaching fitted to educate the students for the work which they would be expected to do in after life. The only branch of medical study which, in his opinion, was not adequately represented at the Leeds Medical School, was the dental branch.

Dr. T. CLIFFORD ALLBUTT, in the course of his reply, alluded to the fact that a Dental Surgeon had been appointed at the Infirmary.

Mr. E. ATKINSON also responded. He said that not only had

a Dental Surgeon been appointed at the Infirmary, but the Leeds Public Dispensary had also, for the first time, appointed its dentist. These institutions, therefore, recognized the dental profession by proper appointments, and if they were made at the eleventh hour it was not because they had not felt the want before. It had been a very great want. He might certainly say on behalf of the surgical staff of the hospital, that they very much appreciated the fact that they had associated with them a gentleman who could help them in many ways. The staff met every week for the purpose of consultation, and they had now the pleasure of seeing at that consultation the Dentist of the Institution, who was always ready to assist them.

The PRESIDENT proposed the toast of the "Vice-President," which was briefly acknowledged by that gentleman.

ORIGINAL COMMUNICATIONS.

On the Causes of the Increasing Degeneration of Human Teeth, in Relation more particularly to the Third Molar.

By T. S. CARTER, L.D.S. Eng.,

DENTAL SURGEON LEEDS GENERAL INFIRMARY.

Read before the Midland Counties' Branch of the British Dental Association on April 26th, 1882.

MR. PRESIDENT AND GENTLEMEN,—It is a lamentable fact that with advancing civilization there is an increasing degeneration of human teeth, and in order that you may more fully recognize the change that is taking place, it will be well to lay before you a few points indicating the superiority of the teeth of the civilized and uncivilized of past and present races, compared with those met with in the greatest centres of advancement in our own times.

I am indebted to a valuable article, written by Mr. John R. Mummery in 1869, for much information on this matter. He examined sixty-eight skulls obtained from ancient British barrows in Wiltshire, and the probability is that they belonged to a race of people who lived before the time of Julius Cæsar. Amongst that number he discovered only two cases where there was decay, and "not a single instance of irregular position of the teeth."

In the crypt of Hythe Church, Kent, there is a collection of

bones of people who existed several centuries ago, and the skulls of these, to the number of about two hundred, were examined by Messrs. Cartwright and Coleman, who afterwards reported the result of their investigations to the Odontological Society.

They found the maxillæ "presented in all instances remarkably well developed alveolar arches," and were unable to find anything "approaching to that which, under the term 'contracted arch,' so commonly exists in the present day." The average width of the superior maxilla, taken from the anterior fang of the first molar on one side to the corresponding point on the other, was found to be $2\frac{1}{2}$ inches, and that of the inferior maxilla, measured across the mental foramina, to be 1 inch and $\frac{3}{8}$ ths.

The teeth "were remarkable for regularity, neither having spaces between them nor being pressed together, but just touching each other laterally. In quality they might be pronounced excellent, much better than are commonly met with in the present day. Of the tissues composing them, the enamel was dense, compact, and evenly distributed over the dentine, which was hard, and of the opaque yellow description indicative of good structure. In a large proportion the masticating surfaces were much worn, probably by the coarse food of that period."

Amongst the uncivilized races of to-day you find a similar state of things existing, and in support of this I will quote a few statistics given by Mr. J. R. Mummery in an article previously referred to. He examined the skulls of various tribes with the following result:—

				Number of Skulls.	Total of Caries.	Percentage of Caries.
Esquimaux	...	...	...	69	2	2.89
North American (Coast)	...	...	...	56	2	3.57
Ditto (Interior)	...	...	...	22	2	9.09
Fiji Islanders	...	...	...	38	2	5.26
New Zealanders	...	...	...	66	2	3.30
East Indian (North)	...	...	...	152	9	5.92

The *Esquimaux*, though a stunted race, possess very finely-developed maxillæ, and teeth remarkable for solidity and normality of position. As the inherited effects of the active use of a part forms a factor in the theory I wish to advocate, it may be well to notice that the *Esquimaux* are a great *flesh*-eating people, living principally on reindeer, whales' flesh and blubber, from ten to fourteen pounds of raw meat per diem being considered a reasonable allowance for each man.

The *American Indians* have teeth little prone to decay, and it is interesting to learn concerning them that the tribes inhabiting the north-western portions of the country have these organs worn down nearly to the level of the gum, a feature not observable in those of the interior. It is accounted for as follows: near the coast the principal food is fish, which they split open and hang out, or lay on the shore to dry; while there, sand gets blown and mixed with the fish, which, when afterwards taken into the mouth, produces this excessive attrition.

Australians and New Zealanders have well-developed jaws and most regular teeth, and their molars are often of an extraordinary size. This is also the case with African races. I have before me the model of a mouth of a Zuluman, which I will pass round. Notice the fine development of the dental arch, and perfect symmetry of the teeth, which are all apparently sound. Supplemental teeth are very common amongst them, and "the third molar is frequently larger than the second." They are great flesh eaters, living principally on big game, as the elephant, hippopotamus, &c.

The instances to be met with of inferior organization of the dental organs amongst the *Bushmen of South Africa*, may be accounted for by the fact that these people are of exceedingly low physique, the local lesion being merely one of the many indications of general insufficiency of development. And a similar state of things may be often observable in the mouths of Microcephalic idiots.

The teeth of the *civilized* of to-day compare very unfavourably in structure and position with those of our ancestors, or the races I have described.

On investigation it becomes at once evident that amongst the middle and upper classes, and to a less extent, among the lower, there is a degenerating power at work producing great disintegration of tooth substance and abnormality of position. This is more evident amongst the residents of large and crowded cities than the inhabitants of agricultural districts. Its progress is rapid, so that one rarely meets with sounder teeth in the children than the parents, and a mother will commonly ask, "Why is it my daughter's teeth are so much more fragile than my own?"

Dr. Richardson in his paper read before the Odontological Society last November, states, that from his tabulated clinical records he find that "over 80 per cent. of the persons who came to him were affected more or less severely with dental caries, and

the number examined amount to over 4,000 of both sexes and of all ages." In his experience this disease is more prevalent in the young than when he commenced medical practice thirty-two years ago. Mr. Coleman in a paper read before the same Society, states that on examination of the mouths of 200 young persons, aged from 7 to 15 years, he found "no less than 70 with dental arches more or less contracted, or otherwise irregular."

The demand for dental aid is greater than formerly, although among other causes attributable to increase of population, there is a proportion of it due to the greater frequency of oral diseases.

In the mouth of a savage you will find the teeth form graceful curves, their structure is dense, the wisdom teeth large and in normal position. In the mouth of the everyday patient you see teeth of a nature, soft, and owing to a frequent want of relation between them and the size of the jaws, they are found to assume various degrees of irregularity, and in extreme cases it is impossible to conceive the diversity of situation in which they may not be met with. Thus, Mr. Tomes mentions an instance in which the third molar on each side was found embedded in the substance of the ascending ramus, the crown of the one on the right side projecting into the sigmoid notch. In another the tooth pierced the skin, just behind the angle of the jaw.

Caries and malposition are not the exception, but the rule. The most common manifestations of degenerative tendency are undue prominence of canine teeth, early loss of first permanent molars, and diminutive wisdom teeth, so uncertain as to period of eruption, also the serious mischief which the latter often induce during the progress of eruption.

It is not necessary for me to say more to prove the evident deterioration which you will have observed in private practice, and appreciate as fully as myself, and I will therefore proceed to give you a suitable explanation of the probable cause.

The one advocated so strongly by Norman Kingsley, that there is a relation between the increase of nervous diseases and the greater frequency of oral degeneracy, is the theory I will lay before you as most reliable.

In these days of progress and competition, when man has to live more by the use of his brain than in former times, and the demand for mental ability, both for business purposes and social advancement, is greater than formerly, physical development is subordinate to that of increase of brain substance. Hence, you

find less muscular tissue and a corresponding loss of vital force and ability to perform feats of endurance, but there is a gain in intellect and mental capacity. There is an increase of brain power at a sacrifice of muscular fibre, brought about by nervous exaltation and the injurious effects of town residence. The style of living taxes the brain to excess, "it develops a great predominance of the nervous temperament at a sacrifice of other parts of the body, and this by inheritance is increased from generation to generation."

Hence, diseases of the brain and nervous system, as apoplexy, insanity and paralysis, are becoming more numerous, as you will see by reference to the annual report of the Registrar General. The death rate from these causes has arisen from 1,116 per million in the five years 1850-54, to 1,400 per million in 1875-79—an increase of no less than 25 per cent. in thirty years.

Some valuable information may be obtained on this subject from three letters written by Dr. Rabagliati, and published in the *British Medical Journal* during December last, from which I find as follows:—If the death rate of the three years 1838-40 be compared with that of the four years 1876-79, it appears that the mortality of the former period was 22·3 per 1,000, and of the latter 21 per 1,000, or an average duration of life of 44·8 years, against 47·6, showing an increase of 2·8 years of life to each individual in this country. But this addition to human life has been brought about by a better treatment of zymotic diseases or fevers, for if they be excluded from the mortality rate it can be shown that human life has actually shortened during the last thirty years.

Dr. Rabagliati is of the opinion that "worry" is a *vera causa*. He says, "Life is carried on in so much more complex a way; there is more haste and pressure; competition, business men say, is so much keener; the speed of railway trains, and the urgency of telegraphic and telephonic communication is so much more pressing, that the general opinion cannot be very far wrong, that there is far more worry or anxiety than there used to be."

Of adults, mortality is greater amongst males than females, probably owing to the latter being less subject to anxiety than the former, added of course to the fact of the great difference of occupations and their attendant dangers to life.

By the law of inheritance the peculiarities of the parent are most frequently reproduced in the offspring. It is on the strength of this tendency that Darwin bases his argument relative to the

formation of species, and you are aware how common it is to see certain anomalies running through several members of the same family. In similar manner the excitable temperament of the parent is generally transmitted to the children, who are precocious and too readily sensitive to emotional influence.

This state of things is usually increased by the over jealous desire of parents for their progeny to show signs of intellect at an early age. Consequently their hours of recreation are curtailed in order that they may receive mental tuition, and it is at this period of life that the brain is so readily overtaxed. Again, mothers like their children to look "pretty," and they are therefore put in figure fitting costumes of fine fabrics, which owing to quality and make, interfere with the perfect liberty of action which the limbs should be allowed at this critical time of life. The physical tendencies of a child thus have unnecessary obstacles to contend with, which retard a natural and healthy development, and at the same time the mental powers receive too much stimulation, and nervous exhaustion is frequently the result.

The most rapid increase in the size of the brain takes place during the first seven years of life, and it is during this term that the crowns of all the teeth, the third molars excepted, are being formed. You may quite reasonably therefore believe that undue mental excitement during this early period of life would interfere with the formative power at work in the developing tooth germs, for the nervous system regulates most of the functions of the body and directly influences the progressive growth of structure.

Dr. Magitôt, of Paris, whose indefatigable labours in the field of science render him an authority in special pathology, read a paper at a meeting of the International Medical Congress upon "Erosion of the teeth regarded as an evidence of Infantile Convulsions." He made out a strong case in favour of his theory that "notches and furrows" on the permanent set of teeth are due to this disease of childhood which temporarily interferes with their natural formation.

The trigeminal nerve regulates the nutrition of the tissues to which its numerous branches are distributed, and the nervous centre from which it takes its origin, is, according to Professor Anstie, the one which in the human subject is most liable to congenital imperfection of the kind which necessitates a breakdown in its governing functions at special crises in the development of the organism. I am therefore of the opinion that the

main cause of the increasing degeneration of human teeth is due to inherited nervous exaltation, interfering with the normal functions of the trigeminal nerve during the first seven years of life. If this be true, you would reasonably expect to find teeth normal in position and of sound structure in the mouths of persons of naturally lethargic disposition or wanting in intellect, and the reverse of this in the case of people who have inherited a hyper-sensitive temperament.

I have little data to work upon, but will call your attention to one point, viz., that you rarely see irregularity in position of the teeth of the temporary set, which may be explained by the fact that they are principally formed during intra-uterine life, and consequently before the effects traceable to the causes I have explained can come into effect. It would also be well to note the effect of idiocy on the dental organs, and I cannot do better than give you the experiences of Norman Kingsley, who has devoted considerable time and attention to the subject. He is of the opinion that the "contracted arch" is associated with a high order of intelligence, and that of congenital idiots there is only a small percentage with pronounced irregularity in form of jaw or position of teeth. On examination of about two hundred inmates of the asylum on Randall's Island, there was not a single case of very marked dental irregularity, though there were three or four "saddle-shaped" palates. Mr. Kingsley was of the opinion that, taking them collectively, they showed far better development of jaws and teeth for density and durability than were generally to be met with. He noticed that where there was a fairly good physical condition and chance of mental improvement, the jaws and teeth were of normal condition.

Professor Stellwagen visited the Pennsylvania school for "feeble minded children," and examined the mouths of one hundred and eighty-four patients. He says, "the jaws were unusually large as compared with the same number of jaws in the mouths of intelligent children, such as would seek the services of the dentist."

The information I have given in proof of there being a correlation between a feeble intellect in early life and well-formed jaws and teeth, is small in amount, but the evidence is sufficiently strong to induce the belief that the theory I am advocating may be the true one, and will bear investigation, and I have therefore confidence in bringing it before you for careful consideration.

In addition to the marked structural depreciation which is tak in

place in the wisdom teeth, there is such an evident diminution in their size, and uncertainty as to period of eruption and position, that we may look upon them as becoming rudimentary and prospectively extinct. It is found in nature that if an organ is becoming suppressed it is apt first to be variable.

Mr. Felix Weiss records that in the case of 312 persons over twenty-six years of age, whom he examined there were 304 wisdom teeth absent. It is in the upper jaw that their size is generally found the most diminished, and I have seen several with crowns not larger than a grain of wheat. Their fangs also instead of diverging are merged into one.

Though these teeth will be subject to the deteriorating influence of transmitted causes previously explained, there is evidently an additional factor at work, which, in my opinion, may be safely taken into consideration as aiding in the reduction of these organs to a rudimentary state.

I have been unable to find an article on the theory I wish to advocate, but after careful consideration have determined to lay it before you; and if, in doing so, I tread upon rather new ground, I trust you will be none the less lenient in your criticism.

It is a law in nature that the development, or the atrophy, of a part takes place as a result of increased use or disuse, or, in other words, nature creates or lessens the supply of tissue according to demand. Thus: though a youth may be remarkable for the absence of muscular development, let him, under favourable conditions, go through a course of systematic physical training, and note the increase of substance which takes place; or, on the other hand, deprive the athlete of the power to continue his life of activity, and observe how his muscles diminish.

Darwin says that, in the domestic duck, "the bones of the wings weigh less, and the bones of the legs more, in proportion to the whole skeleton, than do the same bones in the wild duck, and this change may be safely attributed to the domestic duck flying much less, and walking more than its wild parents."

It is frequently found that ground-feeding birds inhabiting oceanic islands, have lost the power of flight, probably owing to their being rarely disturbed by beasts of prey, and their wings little used.

Domestic animals are seldom alarmed, and notice how their ears droop, which may be due to non-use of the aural muscles. Also note the small development of the udders of cows in countries

where they are not systematically milked, in comparison with those on English farms.

May not, therefore, the marked diminution in size of the wisdom teeth of civilized races, as compared with the large development of the corresponding teeth of the *uncivilized*, be dependent upon a lessened demand for masticating power?

The wisdom teeth of savages are nearly as large and well developed as the first and second molars, they are found to occupy a normal position and are, in structure, little prone to decay.

Mr. Mummery examined 141 skulls from powerful African races, and did not find a single deficient third molar, but, on the contrary, met with five cases where there were fourth molars in the upper jaw.

Savages live upon coarse foods, which they only roughly cook by broiling over burning logs or "toasting over the fire," and the meat is generally fresh killed, and not of the tenderest fibre. With the ancient Britons the same rude method of preparing food was probably adopted, and, as a result, it is commonly found, on examination of their skulls—as well as those of savages of the present day, that the teeth are ground down to the level of the pulp chambers. This is especially observable in the mouths of New Zealanders.

In order that coarse food taken into the mouth may be rendered fit for passage into the stomach, it is essential that there should be teeth with large grinding surfaces, suitable for pounding and triturating the substances given to work upon, and the third molar will be in constant use.

Darwin says: "If, under changed conditions of life, a structure before useful becomes less useful, its diminution will be favoured, for it will profit the individual not to have its nutriment wasted in building up an useless structure."

Well, Gentlemen, the conditions of life *have* changed. Amongst civilized races food is *not* eaten in a half-raw state, but is carefully selected and softened by a system of cooking, so as to have lessened the necessity for the extent of masticating surface found to have existed in the mouths of our ancestors, and amongst people of simple habits of to-day. The wisdom teeth have, to a great degree, been thrown out of work, and on the principle I have explained, that *use* induces development and *disuse* atrophy, do I believe the degeneration so observable in the third molar of the present day may be attributed.

Lessened use of the dental organs has induced a diminution in the size of the muscles of mastication, the zygomatic fossæ are smaller than formerly, and probably the failing elongation of the jaws posteriorly is a result. Should the wisdom teeth ultimately become rudimentary—as teeth are found to be in the jaws of unborn calves, and in the heads of foetal whales—they will even then do good service by acting as a link by which future naturalists may trace the source of our common origin.

On the Manipulation of Vulcanite on the Plate and Tinfoil System.

A Paper read at the Annual General Meeting of the Eastern Counties' Dental Association,

By A. LINDLEY LITTLEBOY, Norwich.

MR. PRESIDENT AND GENTLEMEN,—The subject that I am about to bring before your notice, is “the manipulation of Vulcanite upon the Plate and Tinfoil System,” believing that it is little known in the Eastern Counties, or if so, adopted by few, though I think if you once introduce it into your working of vulcanite, you will not feel inclined to relinquish it, as there are many advantages in the system which you will perceive as we progress.

First you require a perfect cast and die to strike up the metal plate—pewter or gaspipe makes a very good metal for the purpose. The plate depends for size and thickness upon the case you have in hand; if it is a whole upper set, you can make the plate all the same thickness, or a graduated plate of two or three plates; of course the inner plate, or plates, would be thinner and smaller than the full size plate. If it is a partial piece, or a whole upper set requiring the mineral teeth to be fitted to the natural gum, the plate requires a slight difference in its construction. The outer or full size plate, should be made in two parts, or cut in two, before the teeth are fitted to the bite; the reason of this I will explain hereafter. Take a piece of tinfoil* a little larger than the model, and press it close all over with the fingers, as you would a lead pattern; place it on the zinc cast and give one tap in the die; then place the pewter plate over the tinfoil and strike the two together in the die, and put the tinfoil away until wanted. The

* Not the tinfoil of commerce, but a foil made from pure tin obtainable at the dépôts.

pewter plate is now finished, and if made of more than one piece wax them together. You can now fit it to the patient's gum as you would a gold plate to see if there is any alteration required. It also forms an excellent base, equal to a gold plate, for taking the articulation of the jaws.

We suppose the artificial teeth are set in their proper position to the bite, you may now fit them in the mouth with greater safety than you can with a wax plate, and any little alteration in the position of the teeth that you may think necessary can be easily made. We now commence the preparatory process for flasking. You must now decide whether you use the original model or not, if the original is used, there is no necessity to oil the plaster cast to prevent the tinfoil adhering to the model. If you use a duplicate, or flask direct from the tinfoil and plate, it is best to oil the model, then place the tinfoil upon it, working a burnisher gently over it. Return the plate and teeth to their position upon the tinfoil covered model; if it is a whole set with artificial gum, run a little wax round the edge of the plate and artificial gum, so as to attach the foil to the set, lift it off the model and cast a little plaster into the tinfoil palate, and when set, flask in the usual way.

Take a piece of foil, the shape of a half circle, and cut a few slits round the edge; press it with care, as you did the other piece, over the palate and at the back of the teeth, leaving the edge of the foil projecting a little above the teeth for the plaster to hold it in its place. Now take a warm burnisher and go carefully over the surface of the foil, taking care not to disturb the teeth—you can easily protect the front teeth with your fingers; apply oil, or any other non-adhesive liquid that you may use, to the plaster with a small brush, taking care not to come in contact with the tinfoil cast on the upper part of your flask, well warm and open; remove the plate and wash out, and the flask is ready for stuffing, with a lining of tinfoil to steam your vulcanite between.

If the artificial teeth are to be fitted to the natural gum, you require a slight alteration in the treatment of the case. Cut away the metal plate to allow the teeth to be fitted clear of the plate, and with a sharp pointed knife cut the tinfoil to the edge of the plate in front, so that the teeth are free of the foil to divide the full size plate, and wax it to the inner plate, then fit the teeth to the bite.

You can now, if you like, try them in the patient's mouth. Oil the model as you did before, replace the foil and teeth and run

a little wax round the inside of the plate to attach the tinfoil, and remove it from the model with care. Turn the piece with its lingual surface upon a flat piece of wood, and cast plaster into the palate and over the teeth; when set, flask it in the upper part of the flask, and trim the plaster from the edge of the flask to the tops of the teeth, slightly covering them, so as to hold them firmly in position and prevent the vulcanite from getting under them. Now take a piece of foil and press over the palate and at the back of the teeth, allowing the edge to project as before, finish with a warm burnisher. Oil the plaster, and cast on the lower part of the flask, warm well, open, and remove the plate. Now you will find the use of the divided plate, as it allows the plate to be removed without any fear of disturbing the teeth, which in some cases I have found very troublesome, particularly when natural teeth intervene. You have, as in the other case, a tinfoil surface to vulcanize between. Before stuffing, burnish and polish with a soft cloth; the brighter the tinfoil, the greater the polish upon the vulcanite piece when steamed.

The advantages you gain from this system are: (1) a certainty of any desired thickness of the vulcanite plate, which cannot be attained with a wax plate, particularly in cases where the rugæ are well defined. (2) In taking the bite and trying in the teeth you have a firm base to work with, which will give you a better idea of the finished set or partial piece than with a base made wholly of wax. (3) The vulcanite is stronger and more elastic when vulcanized between tinfoil than plaster. (4) The palatal and lingual surfaces are in a polished state when the tinfoil is stripped off, and very little trimming and filing is required, therefore much time is saved in finishing the piece for the mouth.

HOSPITAL REPORTS AND CASES IN PRACTICE.

Extraction of Nine Teeth for the relief of Facial Neuralgia, subsequently found to be due to Acute Glaucoma.

By W. J. MILLES, F.R.C.S.,

HOUSE SURGEON AT THE ROYAL OPHTHALMIC HOSPITAL, MOORFIELDS.

THE following case, which lately came under my observation, may be of service to your readers as illustrating the fact that neuralgic

pain may be occasionally referred to a dental cause, while really traceable to another cause altogether.

The patient's history is in brief as follows:—Miss E., aged 54, after some unaccustomed manual exertion on January 27th of this year, was seized suddenly on the following day with what she considered to be neuralgia on the right side of the face. Her doctor thought that the probable source of the neuralgia lay in three teeth in the upper jaw (the only ones she possessed on that side), and accordingly removed them. After the operation the intensity of the pain somewhat diminished; but she noticed that the sight of the right eye was failing rapidly. Three weeks later similar pains appeared on the left side, together with left sided neuralgia, and failure of sight in left eye. Three teeth and three stumps were removed on the left side, leaving no more teeth in the upper jaw at all; the pain, however, continued with unabated violence. All her upper teeth were gone, but the neuralgia continued and the weakness of vision increased. At last she came to Moorfields Hospital, and it was at once evident that she was suffering from acute glaucoma, the great increase of tension of the eyeballs quite accounting for all the pain she had suffered, and the concurrent impairment of vision. With the right eye she could only see shadows, and with the left barely count fingers at twelve inches. An iridectomy was performed on each eye, and as a result the neuralgia has disappeared and the vision decidedly improved; but no doubt the long interval that unhappily elapsed between the attack of glaucoma and the iridectomy has resulted in a permanent impairment of vision.

Case of Mucous Engorgement of the Antrum.

By JOHN STIRLING, L.D.S. Eng., Ayr.

A WOMAN, about 25 years old, called on me in September last with a swelling of the right cheek, which she said had existed about two years. She had consulted a surgeon a few months previously without obtaining any relief, and latterly the pain had become so severe that she could not sleep at night.

On looking into her mouth I found that the anterior wall of the antrum, below the malar protuberance, was very much distended, and that the crown of the second superior bicuspid had been destroyed by caries. She could not say that she had toothache from any of her teeth, but the pain extended from below the eye back-

wards along the cheek, and was sometimes dull and heavy and sometimes lancinating. She had observed that the right nostril was dry, but could not say how long it had been so.

I extracted the second bicuspid root, and there immediately followed a discharge of glairy mucus; I then crushed in the distended bone with pressure of the fingers, and the swelling on the face was at once considerably reduced. There was an opening into the antrum which would have admitted my little finger—I syringed it three or four times with tepid water.

Eight days afterwards there was still a little pain, but she had been very much relieved. I syringed with weak solutions of sulphate of zinc and carbolic acid. Three weeks afterwards the pain had entirely ceased, and there was only a slight swelling on the face. I considered no further treatment was necessary, and told her to call again only if she had any more trouble with it.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

Eastern Counties Dental Association.

THE first Annual General Meeting of the members of this Association, was held at the Norfolk Hotel, Norwich, on the 26th ult., R. White, Esq., L.D.S., President, in the Chair. Amongst those present, were Messrs. J. B. Bridgman, F. Boulger, B. W. Harcourt, A. L. Littleboy, and R. W. White, of Norwich; W. A. Rhodes, and A. Jones, of Cambridge; H. W. Tracy, of Bury St. Edmunds; W. Marsh, of Colchester; J. F. Cole, of Ipswich; J. J. Musgrave, of Lincoln; W. Stringfield, of Lowestoft (*Hon. Sec.*); F. Hall, of Hertford; George Cunningham, Wisbeach; E. Saunders and James Parkinson, of London, and several medical visitors.

The Secretary read the minutes of the meeting held at the same place on the 5th October last, and the Bye-laws then adopted. These were eventually confirmed without any alteration; there was, however, considerable discussion with regard to the first bye-law, which runs as follows:—

“1.—A person registered in the Dentists’ Register shall be eligible for election as a Member of this Association; provided he be of good character, that he does not conduct his practice by means of the exhibition of dental specimens, appliances, or apparatus, in an open shop, or in a window, or in a show-case

exposed to public inspection ; or by means of public advertisements or circulars describing modes of practice, or patented or secret processes : or by the publication of his scale of professional charges ; or by the assumption of any title, degree, or diploma, not recognized by this Association."

Mr. PARKINSON suggested that it would be better to strike out the last clause of this rule ("or by the assumption of any title," &c.); he thought it would give rise to some difficulties in the future, and it was really unnecessary, for as the elections would be by ballot, it would be very easy to keep out of the Association any person who might be considered objectionable.

Mr. R. WHITE remarked that the bye-law was not in accordance with those adopted by the British Dental Association. Would this give rise to any difficulty if it should be proposed to affiliate this Association to the British Dental Association?

The SECRETARY replied that when the time arrived for affiliating themselves with the British Dental Association, the rules of their Association would be made subservient to those of the British Dental Association.

Mr. PARKINSON asked whether it was not possible to affiliate the Association at once to the British Dental Association. This Association would still be governed by its own laws.

Mr. R. W. WHITE asked if the bye-laws of the Midland and Western Counties Branches were the same as those of the British Dental Association?

Mr. PARKINSON replied that the Western Counties Branch had not the clause which this Association proposed to adopt.

Mr. BRIDGMAN explained that it was thought that this rule, if adopted, would avoid the unpleasantness of black-balling by preventing a certain class of men from becoming candidates for membership.

Mr. WHITE said it had always been intended to affiliate this Association, when established, to the British Dental Association ; this he desired to see accomplished as quickly as possible, and it would be a great disadvantage to their Association if this union should be prevented, since their numbers were so few that they could do little by themselves, and they would be deprived of advantages which other branches enjoyed. He was, therefore, desirous so to arrange their bye-laws that their Association might quickly be made a branch of the British Dental Association.

Mr. PARKINSON said that one difficulty the Association would

experience if this bye-law was adopted was that it would have to state what degree, title, or diploma it would recognise. Still the bye-law would not militate against the Association becoming a branch of the British Dental Association.

Mr. WHITE said that in that case he saw no reason why it should not be retained as it stood. It would be open to the Association to rescind it at any time.

It was accordingly agreed to, and the rest of the bye-laws having been approved,

Mr. JONES, of Cambridge, proposed, and Mr. B. W. HARCOURT, of Norwich, seconded a resolution that Mr. White, of Norwich, be elected President for the ensuing year. It was carried unanimously.

The following gentlemen were then elected to form the Council, with power to add to their number, viz., Messrs. R. W. White and B. W. Harcourt, of Norwich; J. F. Cole and N. Tracey, of Ipswich; W. Marsh, of Colchester; Geo. Cunningham and A. Jones, of Cambridge; J. J. Musgrave, of Lincoln, and F. Hall, of Hertford.

Messrs. Bridgman and Stringfield were unanimously re-elected as Treasurer and Secretary respectively.

Mr. Cole was nominated as President-Elect, and Ipswich was fixed upon as the place for the next annual meeting.

Mr. STRINGFIELD then read his report, giving an account of the origin of the Association. It was first suggested in a letter written to him by Mr. J. S. Turner, the indefatigable Secretary of the British Dental Association. Mr. Stringfield then wrote to their President, requesting him, as one of the oldest members of the profession in those parts, to convene a meeting for the purpose of discussing the question. Mr. White wrote to twenty-one gentlemen, and, the opinions of the majority being favourable, a meeting was called for October 5th. At this it was decided that the Association should be formed, but that, for the present, it should be independent of the British Dental Association, "for had we attached ourselves it would have been required of all our members that they should become members of this Association previous to their election into ours, whereas some in the Eastern Counties to whom we looked for support in the first instance, were not so, and I believe one or two remain in that position at the present time."

"The wide area our district embraces, viz., nine counties, it was hoped would have produced more than twenty-three members, but

that, gentlemen, is the total number at present on our books. I believe all have been written to that should be solicited, but it is possible that some may have been overlooked, and I, therefore, earnestly request all members to give me every information in their power, and to send me the names and addresses of such gentlemen as may from time to time come within their knowledge, and who may be eligible for election."

The PRESIDENT then proceeded to deliver his inaugural address.

He began by congratulating those present on the success which had attended their efforts for the establishment of the Association. Although the field they occupied was extensive, the members of the profession practising in it were scattered far apart, and those who were both eligible and willing to join were comparatively few in number. Still it was gratifying to be able to state that they had secured the adhesion of those who would by their contributions give such interest to the meetings as must ensure success. These meetings would also lead to the formation of professional friendships, and to a better knowledge of each other, which would tend to remove much that had been the subject of regret to many in past years.

The main subject of the address was a retrospect of the progress of dentistry in this country and in America during the last fifty years—during forty of which he had himself been engaged in practice in the city of Norwich. Mr. White dwelt especially upon the fact that the more rapid progress of the American school of dentistry, as compared to our own, was due to the earlier recognition in the United States of the benefits of organization and mutual improvement—the first Dental School having been opened at Baltimore in 1839, and the first Dental Society started at New York in 1840, whilst we in England did not succeed in establishing similar institutions till fifteen years later. The consequence of this was that, although England possessed such authorities as Bell, Nasmyth, and Tomes, our brethren across the Atlantic were in advance of us as regards the excellence of their practical work. Now, however, this lost ground was being gradually recovered, and although it was, unfortunately, still true that much of the conservative Dental Surgery of this country lacked the patience and thoroughness which were so necessary to success, and which was so characteristic a feature of American work, still with flourishing

schools, more perfect local and general organization and State recognition, Dentistry in England was making rapid progress, and the prospect which lay before the younger members of the profession was bright indeed,—a great contrast to the position of their predecessors, who had too often had good reason to be ashamed of their profession and its surroundings.

Mr. E. SAUNDERS proposed, and Mr. JAMES PARKINSON seconded, a vote of thanks to the President for his able address. This having been carried by acclamation, the members adjourned to the President's house for luncheon.

The members re-assembled at 4 p.m., when Mr. A. L. LITTLEBOY, of Norwich, read a paper on "The Manipulation of Vulcanite on the Plate and Tinfoil System," an abstract of which will be found at p. 218. Mr. Littleboy added that he had used this system exclusively for the last sixteen years, and had obtained excellent results in suction cases. The paper gave rise to an interesting discussion, in which Messrs. Musgrave, Marsh, Cunningham, R. W. White, and the President, took part.

Mr. CUNNINGHAM followed with a paper on "Gum Treatment," which also gave rise to a debate.

Mr. MARSH then gave a demonstration of his mode of counter-modelling. He first took a strip of paper about three inches in width and wound it round the model, so that it stood about it like a close fitting ring. Then he placed an iron casting ring outside it, and filled the space between them with sand. It was then ready for the metal of the counter-model to be poured upon the model in the paper ring. His other plan, which originated with a pupil of his, and which was new to all present, who expressed their approbation of it, consisted in cutting a mould for the counter-model in the sand mould in which the model had been cast. With a knife, the mould was cut through from the palate down to the board upon which it stood and shaped into a cone. The model was then replaced in the mould and inverted upon a little sand, when it was seen that a very good mould was thus prepared for the counter-model.

A paper on "Wisdom Teeth," by Mr. R. W. WHITE, followed by a discussion, brought the afternoon meeting to a close.

In the evening the members and friends dined together at the Norfolk Hotel. After dinner, Mr. Cole, the Vice-President, pro-

posed "Prosperity to the British Dental Association," associated with the names of Mr. E. Saunders and Mr. Parkinson. Mr. Saunders having responded, Mr. Parkinson proposed "Prosperity to the Eastern Counties Dental Association," coupled with the health of the President. Mr. White, in reply, again dwelt upon the necessity of union amongst the members of the profession. Various other toasts followed, and a very pleasant evening was passed.

Odontological Society of Great Britain.

THE usual monthly meeting of this Society was held at its rooms, 40, Leicester Square, on Monday, the 1st inst., Samuel Lee Rymer, Esq., President, in the Chair. On taking his seat, the President reminded the members that since their last meeting the world had lost an eminent worker in the field of science. Although Mr. Darwin had passed away at a ripe age, and had left in his works a precious legacy highly valued throughout the world, still they could not help regretting that these well-directed and fruitful labours had come to an end, and the Council had deputed him to propose that the Society should give expression to this feeling by sending a message of condolence to the widow and family of Mr. Darwin. This was at once agreed to.

Mr. HENRY SEWILL showed a lower molar which looked as if a longitudinal section had been made through one of the roots, the crown being intact. The tooth was in the same condition when extracted, the missing fragment being removed separately; the patient had not met with any accident, and no cause could be assigned for the fracture. He also showed the lower first molar of a boy aged six, having a large cavity in the posterior surface into which part of the crown of the second molar had fallen. Mr. Sewill extracted the first molar, and the second came out with it; he at once replaced it, the tooth soon became firm, and no harm appeared to have resulted. A similar accident had occurred twice before in his practice; in one of these cases, the accident only saved the necessity for a second operation, whilst in the other the tooth was replaced at once and did well.

In 1874, he had mentioned at one of the Society's meetings the plan of drying cavities by the use of absolute alcohol. He had since continued the practice with very satisfactory results, and was induced to mention it again because he did not think it was as

generally known as it might be. Of late he had used ordinary strong rectified spirit, instead of absolute alcohol, and found that it answered the purpose very well, and it had the advantage of not blistering the lips and tongue if they were accidentally touched by it.

Another question on which he was desirous of ascertaining the views of members generally was whether or no it was wise to extract the teeth of pregnant women. Such patients were constantly coming for advice and to be relieved of pain, but when extraction was proposed, it being evident that the tooth was past saving, one was met with the answer that the patient's doctor did not consider that it would be safe for her to undergo the operation in her present condition; so the patient continued to suffer, and her strength was reduced by the pain. His own practice was, in the early stage of pregnancy, to give gas and extract the tooth. Even if the patient was weak and nervous, he believed that the slight shock of the operation did less harm than the exhaustion produced by long continued pain. In more advanced cases, one must be guided somewhat by circumstances, but in most of these even he believed that extraction did no harm.

Mr. CHARTERS WHITE said that with regard to the removal of two teeth instead of one, the accident had occurred four times in his practice. In each case the left lower second bicuspid had come out with the first left lower molar; the latter being the tooth he intended to extract. He had always replaced the bicuspid at once, securing it temporarily with a silk ligature, and the cases had all done well.

Mr. COLEMAN, and Mr. S. J. HUTCHINSON, said they had each of them met with this accident once, and the latter asked Mr. White and Mr. Sewill whether they thought that the teeth which they had replanted had maintained their vitality?

Mr. CHARTERS WHITE replied that it was difficult to judge what the condition of the pulp might be, but that so far as appearance and sensibility went these teeth did not differ from those which had not been disturbed.

Mr. SEWILL said that of course he could not be certain that the vessels had re-united at the apical foramen, indeed he thought it more likely that they had not; but there could be no doubt that the periosteal vessels had re-united and these appeared to be quite sufficient to maintain the vitality of the tooth.

Mr. STOCKEN said that he had found alcohol a very useful application to cavities and to root canals; instead, however, of using ab-

solute alcohol, his plan was to mix ordinary strong rectified spirit with carbonate of potash in a stoppered bottle. The carbonate, having a strong affinity for water, abstracted it from the spirit, and although the result was not absolute alcohol it would be found quite strong enough for this purpose.

Mr. COLEMAN said he had found the spirit very useful for drying cavities; it served also to make the saliva less viscid and more easily removable.

Mr. F. CANTON said he had frequently been asked as to the advisability of extracting teeth during pregnancy, and never hesitated to answer in the affirmative. He always preferred to give gas in such cases, and took care to give it *thoroughly*. He had never seen any harm result from the extraction of teeth under these conditions.

Mr. COLEMAN said he never hesitated to operate in such cases when an operation was really necessary. Long continued pain might of itself produce a miscarriage, and the shock of an operation performed without gas might in some patients have the same effect. He thought it best therefore always to give gas.

Mr. F. H. WEISS said he always had a fear in such cases lest the mental impression upon the mother should produce deformity in the child. Was there no danger of this?

Mr. STOCKEN replied that he had been assured by an eminent accoucheur that there could be no danger of producing deformity in the child after the mother had passed the period of quickening.

Mr. LLOYD WILLIAMS mentioned a case in which he had been blamed because his patient was prematurely confined a day or two after an extraction under gas; the operation had been perfectly painless.

Mr. SEWILL said that ignorant people were very apt to confound *post hoc* with *propter hoc*, and to say that such an accident was due to the operation when it was really due to the antecedent nervous disturbance, and to their own neglect in not applying for advice sooner. At the same time it was no doubt true that some women were very liable to miscarry on slight causes, or with no apparent cause, and if there was evidence of such a tendency it would be right to act cautiously.

Mr. W. T. HENRY showed a model of the mouth of a child eight years of age, in which the lower incisor teeth impinged upon the necks of the upper incisors on the lingual aspect, causing the latter to project forwards in a most remarkable and unsightly

manner. Taking into consideration the fact that his patient was a most troublesome and refractory child, he thought the best thing to do would be to cut off part of the crowns of the lower incisors, extract the upper canines and then draw in the upper incisors.

MR. STEELE described a plan of treating such cases which he had followed with very satisfactory results. It consisted in gagging the front of the mouth by placing a gold or vulcanite plate for the lower incisors to strike against, so arranged that when the jaws are closed the molars are clear of each other. The tendency of teeth being to advance if they have no antagonists, it would be found at the end of three months that the space between the molars would have disappeared, and that they would meet even when the plate is in position; and that when the plate is removed the lower incisors no longer strike upon the upper: the latter must, of course, also be drawn back.

Mr. S. J. HUTCHINSON was of opinion that less active measures than those proposed by Mr. Henry would probably answer his purpose. He thought that if he could persuade the father to wait until the child was twelve years old, and the permanent molars were in position, he would find that the deformity would by that time have become much less marked. He might then remove the first bicuspid and draw back the incisors.

Mr. HENRY said he was very much obliged to Mr. Steele for his hints and should certainly be disposed to try the plan, though he feared he should not be able to get his unruly patient to wear the plate for any length of time. As for Mr. Hutchinson's suggestion that nothing should be done until the patient was twelve years old, that was out of the question. The case had been getting rapidly worse during the last eighteen months, and he had no expectation of any improvement except as the result of treatment.

The PRESIDENT then called upon Mr. Steele to read his paper on "the Connection between Mechanical Injury and Caries of the Teeth."

Mr. STEELE was of opinion that the influence of mechanical injury of the teeth as a cause of caries, although mentioned by several writers, had not received the attention which its importance required. Various chemical and vital theories had been put forward and fully described, but without denying the importance of chemical and physiological changes, he believed that mechanical injury was the most frequent and most direct cause of the mischief. The generally received opinion was that the exciting cause of caries

was an acid condition of the fluids of the mouth, producing decomposition of the earthy salts which entered so largely into the composition of the dentine. Most authorities held that enamel was not liable to caries, and it seemed probable that so long as it remained perfect it would serve to protect the dentine also from the ravages of this disease. But the enamel was so liable to injury from various causes, and at so early an age, that it was rare to find teeth in which this structure was not more or less damaged, though not always so much so as to render it useless as a protective armour. If then the enamel should happen to be imperfect, whether from congenital deficiency, or as the result of concussion, or from being unfairly used, the acid fluid would obtain access to the underlying dentine, and serious results would follow. The practical deduction from this view of the subject was that more pains should be taken to impress especially upon young people the importance of not abusing their teeth. They should be assured that in subjecting these organs, which appear to them so hard and strong, to all sorts of rough treatment, they are laying up for themselves serious trouble in the future. He felt sure that the spread of a better knowledge of the evils of maltreatment, and the consequent exercise of greater care would be followed by a perceptible diminution in the ravages of dental caries.

A discussion ensued in which the President and Messrs. Charters White, F. H. Weiss, Sewill, Canton and Stocken took part. Mr. Steele having replied, the President announced that at the next Meeting (on June 5th) a paper would be read by Mr. Hunt, of Yeovil, on "Celluloid." The Meeting was then adjourned.

The Metropolitan Counties' Branch of the British Medical Association.

A most brilliant and numerous attended *Conversazione* was given by Mr. Edwin Saunders, F.R.C.S., the President of the Branch, at the South Kensington Museum, on the evening of Wednesday, the 10th inst. Amongst those present were Sir Bartle Frere, C.B., and Lady Frere, Sir Thomas and Lady Gladstone, the Countess of Devon, Lord and Lady Mowbray Stourton, Mr. Fung Yee, the *Chargé d'Affaires* in the absence of the Chinese Ambassador, Sir Edmund and Lady Lechmere, and other distinguished visitors, besides all the leading members of the medical and dental

professions. In addition to the almost unrivalled attractions of the museum, the band of the 2nd Life Guards, alternated with a party of first-rate glee-singers, selected from the choirs of St. Paul's Cathedral and Westminster Abbey, and led by Mr. Edwin Moss, of the Foundling Chapel, helped to render the evening a most enjoyable one, and one that must have enhanced the reputation already gained by our distinguished fellow member for splendid and well-ordered hospitality.

MINOR NOTICES AND CRITICAL ABSTRACTS.

The Treatment of Teeth with dead or dying Pulps, and of Alveolar Abscess.

(Concluded from Page 187).

As previously stated, the treatment of an alveolar abscess depends upon the cause, and the condition in which we find it. If in the earlier stages of inflammation, and the cause is a dead or putrescent pulp, the thorough removal of the cause, with antiseptics left in the roots, and aconite and iodine applied to the gums will afford relief. The further treatment consists in bringing the remedy in contact with the pyogenic sac, cauterizing its entire surface, to promote healthy granulations. If no fistula has been formed, and it is impossible to force the remedy through the canal, it has been recommended to drill through the root. This, in perfectly straight roots, if carefully done, is not bad practice; but, as we can never know positively that a root has not some curve, such a course is always risky. It is a little over eight years since I abandoned this practice; at that time two teeth were lost from this cause—an upper bicuspid and lateral incisor. The roots of both these teeth having an abrupt curve near their apices, my drill came out at the sides. I then decided to try cleansing the canals, treating with antiseptics, and trusting to nature for a cure.

After cleansing and drying as thoroughly as possible, I swab the canals with iodine dissolved in commercial creosote, using cotton wound on a broach for the purpose, leave cotton in the canals saturated with the medicine, and seal with a temporary filling. If the liquid is carried through the foramen, as is often the case, a burning sensation will be experienced. If the *liquid* does not go through, the vapours of the iodine

will, if the cavity is perfectly sealed, unless the root is absolutely stopped. I treat these cases upon the hypothesis that where there is sufficient opening through the canal for the gases from a decomposing pulp to escape, the vapours of iodine will find an exit. I am not certain but that the vapours coming in contact with the sac are quite as efficacious as the liquid, though where I *know* there is pus, I am not careful to prevent the medicine from going through in liquid form. On the other hand, where I doubt the existence of pus, I *am* careful to prevent the liquid from passing through the root, as an escharotic applied to the already inflamed membrane would probably result in suppuration. The vapors, instead of being escharotic, act as antiseptics and gentle stimulants to the membrane and weakened coats of the vessels. As an evidence that the iodine does find its way through the roots in some form, I will mention the fact that in nearly every case where a fistula exists, the patient complains of the taste of iodine until the fistula heals, although the cavity is filled as perfectly as I can fill it. Thinking perhaps my gutta percha fillings leaked, I have filled, in some cases, with cement, and the taste of iodine continued. Where no fistula exists, soreness sometimes results from stopping up the cavity, and the patient should be instructed to return at once, or remove the temporary filling, if necessary. The cases in which trouble is most likely to occur are nervous, debilitated patients, confined by indoor employments. The operator should be governed by the condition of the patient at the time of treatment, whether it will be safe to seal up the cavity or not. The menstrual period in delicate ladies suffering from uterine diseases, and the first months of pregnancy, are conditions requiring extreme caution.

I find by experiments out of the mouth, that iodine will go through the roots where carbolic acid will not. This was tested by winding the roots with cotton, and imbedding all but the crowns in plaster. I am aware that the conditions are not the same as in the mouth, but the fact that the odour of the iodine was found upon the cotton where no trace of the acid could be discovered, is evidence that the vapours of the iodine found an exit through the apical foramina, where the acid did not. The principal objection urged against the use of iodine is that it discolours the teeth. Alcohol and carbolic acid have been used to wash it out. This they do by dissolving it, but at the same time it penetrates the dentine, leaving a slight stain. Ammonia posses-

ses the property of neutralizing the colour of iodine ; therefore, if the cavity is immediately washed with it, no stain remains. A colourless tincture of iodine is made by adding about one drachm of solution of ammonia to one ounce of the tincture. In this proportion the colour disappears in about forty-eight hours. I have been using this, to a limited extent, for a few months, and think it will prove a useful remedy. It certainly seems to arrest the secretion of pus promptly. For injecting a sac through the fistula, I know of nothing better than an alcoholic solution of salicylic acid. This, if the root is properly cleansed and treated, and the patient is in fair health, will usually effect a cure. In those cases with large foramina, where chronic inflammation remains after the secretion of pus has been arrested, considerable benefit may be derived from the use of the tincture of hydrastis, calendula, or sulphate of zinc and sulphate of morphia, each five grains to the ounce. The cotton in the canals should be changed frequently during treatment, as, if left too long, it becomes offensive, causing irritation to the already weakened membrane. External poultices should never be used in the treatment of this disease, neither should an abscess be allowed to break upon the face. Where poulticing is necessary, a roasted fig applied to the gum is sufficient. I stated that no abscessed tooth had been lost during the past eight years where an opportunity had been afforded me for carrying out my treatment. While this is true, I wish to state distinctly that I have no idea that I can treat every case of this disease successfully. That I have been fortunate I admit ; but I may fail in the very next case. I mention the fact reluctantly, and solely for the purpose of encouraging others to greater thoroughness and perseverance. I have two chronic cases under treatment at the present time which have given me considerable trouble, but both are nearly well, and I hope to save them. I will mention a case or two, which may be taken as an average of my cases and their treatment. Case 1st, June, '76.—Mrs. I., abscess right superior first molar. Tooth sore, face and gums swollen and very painful ; had been under treatment for weeks. She had been told it would require from six weeks to three months to effect a cure, with doubt expressed as to the result. Applied rubber dam, carefully excavated the cavity, and found that an attempt had been made to extirpate the pulp through a small opening in the pulp chamber, which was so far from being successful that the buccal canals had hardly been touched. Spent

half a day of diligent labour in cleansing these canals ; sponged, dried and treated with the iodine and creasote, as before described, sealing up the cavity as usual. Painted the gums with aconite and iodine, and dismissed the patient. In a few days the tooth was nearly well. I treated as before, and in three or four days filled the roots. In one week, filled the crown with gold. Last winter saw the case, and found it had given no trouble. Case 2nd, April '81.—Mrs. C., from an adjoining town, abscess of left inferior first molar, with pus discharging through fistula ; also, pericementitis of right inferior first bicuspid. Was half a day cleansing these canals ; treated and filled, temporarily, as described ; came again in one week, and both teeth, apparently perfectly well. Filled root in bicuspid, and changed cotton in molar, not having time, between trains, to fill the roots.

Occasionally chronic abscesses, occurring in debilitated patients, require something more than local treatment. It is well known that if an ulcer or canker patch upon the lip or cheek is cauterized while the patient is debilitated, it is made worse ; but if a tonic is administered for a few days previously, one application of the caustic is usually sufficient for a cure. The same is true in the treatment of abscesses. This is illustrated in the following cases.—A coloured girl, with abscess of the antrum, was treated locally for some weeks, and at times it appeared nearly well, but would again suppurate. A tonic of quinine and iron was prescribed, and the local treatment continued as before. From this time there was a marked improvement, which continued until a permanent cure was effected. A lady about seventy years of age, having worn an entire artificial denture for twenty years, was suffering from an abscess of the anterior portion of the superior maxilla, which had been treated by her physician for some months, local treatment being continued after coming under my care. This, like the former case, was cured only after the administration of a tonic. One more case I desire to mention is that of a lady recently recovered from an attack of intermittent fever, and also debilitated by nursing a large healthy boy the second summer. An abscess of the left superior lateral incisor resisted all local treatment until a tonic was administered, after which one application of salicylic acid to the sac through the fistula effected a complete cure.

I have omitted, but wish here to state, that the only certain test I have ever found for the vitality of a pulp is the rhigolene

spray applied to the tooth after it has been isolated by the adjustment of the rubber dam.

In conclusion, I will say that, aside from necrotic conditions, I think failures result principally from four causes, viz. : imperfect cleansing of the pulp chamber and root canals ; forcing foreign matter through the foramina ; over medication, or the too frequent application of caustic remedies, keeping up the secretion of pus ; leaving cotton too long in the roots until it becomes offensive, causing irritation ; and finally, by not paying sufficient attention to the general health.—*Missouri Dental Journal*.

Fatal Accident During Tooth Extraction.

THE following are the particulars of this unfortunate case, as given in the *Preston Herald* of the 29th ult. Mr. Miller is a Licentiate of the Irish College of Surgeons, who combines the practice of dentistry with that of pharmacy. We have referred to the practical bearings of the case elsewhere in this number:—

An inquest was held at the Rose Bud Inn, London Road, on the 27th inst., before Mr. William Gilbertson, the Coroner, on the body of William Lee Smith, a boy ten years of age, who had died suddenly at the shop of Mr. Miller, dentist, London Road, that morning, after having had several teeth extracted. The following evidence was given:—Joseph Smith, auctioneer, of Chorley, said: The deceased, William Lee Smith, was my son. He was ten years old. I brought him to Preston this morning to have his mouth examined by Mr. Miller, of London Road. Mr. Miller examined his mouth, and advised that he should have one or two teeth extracted. He had not got rid of all his first teeth. I wished him to have gas during the operation. I knew no reason against it, and Mr. Miller administered the gas. Mr. Miller's assistant was present. The deceased took the gas very nicely, and became unconscious. Mr. Miller then extracted two or three teeth. Within a minute Mr. Miller had finished, but the boy did not revive. He put up his hand to his throat once. He changed colour, and went dark in the face. I thought there was something wrong. Spirits of ammonia were brought, and I requested Mr. Miller to go for the nearest doctor. He returned with Dr. Marshall, who pronounced the boy to be dead. Deceased had been a healthy boy. He was at school till eleven o'clock this morning. We left Chorley at twelve. He had not had teeth extracted by instruments before. Nathaniel Miller, dentist, London Road, said: The deceased was brought to my surgery to-day, about ten minutes to one, by his father, who instructed me to examine his mouth. I found several first teeth which were interfering with his permanent ones. I advised that several should be removed, as his mouth was very much crowded. I proposed he should have nitrous oxide gas, as there would be several operations. He seemed a healthy-looking boy. He sat in the chair, and I administered the gas for fifteen or twenty seconds. I then found he was unconscious. I extracted seven teeth in about twenty seconds.

The effect of the gas would last more than half a minute. Immediately after I thought something was wrong as he did not breathe freely. I am satisfied from his colour that he was unconscious, I thought he had got something in his windpipe. I bent his head forward and struck him on the back. I tried with my finger, but could feel nothing in his mouth. I dashed cold water on his face. He struggled for breath, and tried to cough, and to ease his collar with his hand. He was still breathing, but hardly, and I ran out for a doctor. I brought Dr. Marshall. The boy was dead when I got back. I found afterwards that one of the teeth I had extracted was missing. I have known teeth slip from the instrument before three or four times, but have always been able to remove them by the means I used in this case, namely, bending the head forward and striking the back. Andrew Marshall, M.D., Preston, said: I was called by Mr. Miller to his surgery this afternoon at one o'clock. When I arrived there, I found deceased sitting in the operating chair dead. I heard afterwards from Mr. Miller that one of the teeth he had extracted was missing. I made a post-mortem examination this evening. On opening the larynx, the upper portion of the windpipe, I found a tooth firmly fixed there, and completely obstructing the passage. That was the cause of death. The symptoms which have been described quite agree with the cause of death. It is a double tooth of the first growth. There was nothing remarkable about the windpipe. The only means of saving life would have been to open the windpipe immediately, and remove the foreign body. The jury returned a verdict of "Accidental death."

Annotations.

THE General Medical Council is, according to present arrangements, expected to meet on the 27th prox.

THE portrait of Mr. John Tomes, F.R.S., which was presented to him in recognition of his services in the passing of the Dentists Act, is now being exhibited at the Royal Academy.

WE are pleased to be able to state that the Dental Hospital of Liverpool has been most courteously placed at the disposal of the British Dental Association, for clinical and other purposes, during its Annual General Meeting in August.

THE editor of the *Progrès Dentaire* calls our attention to the fact that the very complimentary notice of this Journal, to which we alluded in our last number, was taken from the *Progrès Médicale*, and adds that it was from the pen of Dr. Cruet, well known as the translator of "Tomes' Anatomy," and also as an able original writer. We are very much obliged to both gentlemen for their good opinion, and need hardly add that we were quite

aware that the publication of the notice some time after date was due to accidental causes. It very frequently happens that we ourselves have articles standing in type for months before we can find an opportunity of publishing them. It must have been evident to all our readers that the paragraph was not intended to be taken seriously.

It is, perhaps, only fair to Mr. Hunt to state that his paper on Celluloid, which appeared in the last number of this Journal, had been unavoidably subjected to considerable Editorial compression. He desires us to say that his remarks were intended to apply to *entire* plates, and that the temperature given at p. 158, line 10, should have been 320°, and not 300° F. As to this latter point, it is the opinion of Mr. Hunt's own authority, Dr. Campbell, that the temperature given by us will be found sufficiently high.

WE have received a letter from the proprietor of the *British Journal of Dental Science* denying the accuracy of our statement that there had been four editors of that journal during the last two years. He says there have been but three. We cannot see that this is a matter of the smallest practical importance, but as our correspondent appears to think differently, we willingly make the correction.

DURING the recent examinations of the Royal College of Surgeons, Edinburgh, Mr. George John Lucas, Blackheath, passed his first professional examination for the Licence in Dental Surgery, and Mr. James Lindsay, Edinburgh, passed his final examination and was admitted L.D.S.

Correspondence.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I trust I have been a consistent supporter of the great and, as I believe, successful effort which has been made to place dentistry on a true professional basis, by insisting on a special and complete education being required for everyone who may wish to follow his profession in a legal manner as a registered dentist.

My isolation may have enabled me to observe events more critically than many of my brethren who have the opportunity of

taking a more active part in the dental reform movement, and, amongst other things, I have noticed with regret that a very limited and, it seems to me, an obscure portion of our profession calling themselves the Association of Surgeons Practising Dental Surgery, resting on the concession made to the medical profession, continue the practice of dental surgery without placing their names on the Dental Register. I also notice that part of their creed is to claim for themselves, by virtue of their possessing a surgical diploma, and without necessarily possessing any dental diploma, the sole use of the title "Surgeon," and that they object to, and would prevent if they could by an amendment of the Dentists Act, their brethren (I beg their pardon!)—the men who have complied with the law, and justified their right to practise dental surgery by passing the necessary examinations—from using the term Surgeon, and calling themselves Surgeon Dentists according to the rights conferred by their diplomas. In this the said Association is entirely at variance with the British Dental Association, and here comes in the reflection which bothers me. There is a gentleman amongst us who is President of the Odonto-Chirurgical Society of Scotland and one of the Examining Board of the Edinburgh College of Surgeons, which certifies to the fitness of candidates to practise dental surgery. He is also a member of the Representative Board of the British Dental Association, and in a recent announcement in the Medical and Dental Journals, I see he is, in addition to all this, an office-bearer in the Association of Surgeons Practising Dental Surgery.

Without trying to analyse the subtlety of a Janus-like attitude, I would, in the interests, and for the information of the many, simply ask if it be quite consistent with the dignity of either of the institutions I have named, that any gentleman, however estimable or talented he may be, should be allowed to gather up official dignity and consideration on every side without being asked for some explanation of his conduct, and for some explicit declaration of his views.

I am, Sir, yours to command,

SCOTCH THISTLE.

Prize Fund for the Edinburgh Dental School.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—A general desire having been expressed by the Dental Licentiates of Edinburgh to mark their appreciation of, and esteem in which they hold the Diploma, it is thought they cannot

better give expression to that appreciation than by helping to establish a fund for providing an Annual Prize to the most proficient student or students in the School.

The following sums have already been promised, and I shall have much pleasure in adding the names of other gentlemen in sympathy with the movement.

Mr. Mac Gregor, 20, Queen Street, Edinburgh, has kindly consented to act as Treasurer.

It is proposed to leave the administration of this fund in the hands of the Senior Dental Staff of the School.

Your obedient servant,

WALTER WHITEHOUSE,

50, Parliament Street, London, S.W.

Hon. Sec.

M. Mac Gregor, L.D.S. Ed., £6 6s.; Joseph Walker, M.D., M.R.C.S., L.D.S., £5; J. Holland, L.D.S. Eng. and Ed., £3 3s.; W. B. Macleod, L.D.S. Ed., £3 3s.; A. Wilson, L.D.S. Ed., £3 3s.; G. W. Watson, L.D.S., Ed., £3 3s.; M. Finlayson, £2 12s. 6d.; Walter Whitehouse, L.D.S. Ed., £3 3s.; C. Mathews, L.D.S. Ed., £2 2s.; F. A. Cormack, L.D.S. Ed., £2 2s.; J. Mackintosh, L.D.S. Ed., £2 2s.; Peter Crombie, L.D.S. Ed., £2 2s.; Austin Biggs, £1 1s.; W. A. Turner, L.D.S. Eng., £1 1s.; J. Greenfield, L.D.S. Eng., £1 1s.; J. Taylor, L.D.S. Ed., £1 1s.; J. Stewart, L.D.S. Ed., £1 1s.; J. J. Bailey, L.D.S. Ed., £1 1s.

Appointments.

MR. WILLOUGHBY WEISS, L.D.S. Eng., has been appointed Lecturer on Dental Surgery at the National Dental College, *vice* Mr. Oakley Coles resigned.

Mr. G. DENNIS CURNOCK, L.D.S. Eng., has been appointed Dental Surgeon to the Metropolitan Free Hospital, Spitalfields, E.

Mr. GEORGE MCADAM, L.D.S. Eng., has been appointed Hon. Dental Surgeon to the Hereford General Infirmary.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

In order to avoid trouble and additional expense, Members of the Association residing abroad are particularly requested to send in their Subscriptions without waiting for a formal application to be made to them by the Treasurer.

The attention of Members is specially directed to the notices referring to the Meeting of the Western Counties Branch on August 5th, and the Annual General Meeting of the Association on August 25th and 26th, which will be found at page 245.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. VI.

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VOL. III.

The Meeting of the General Medical Council.

THE Council is summoned for Tuesday, June 27th. Included in the general business will be the re-consideration of the correction of the Dentists' Register, which it is generally admitted was dealt with hastily and without due consideration, not without protest however, at the disastrous meeting in February, 1881.

The Dental Committee is empowered, in Sect. 15 of the Dentists' Act,* to enquire into and determine the facts of cases of alleged incorrect registration, but it is not empowered to determine the law applicable to the facts. This

* "The General Council shall for the purpose of exercising in any case the powers of erasing from and of restoring to the Dentists' Register the name of a person or an entry, ascertain the facts of such case by a committee of their own body, not exceeding five in number, of whom the quorum shall be not less than three, and a report of the Committee shall be conclusive as to the facts for the purpose of the exercise of the said powers by the General Council."—(*Dentists' Act, Sect. 15.*)

power rests with the Council, and cannot be delegated to the Dental Committee. By an oversight in the reading of the Act, the opinions of (now) Lord Justice Bowen, and of Mr. G. A. R. FitzGerald, were wrongly referred to the Committee, which Committee, for all that appears to the contrary, put them aside, and in its report substituted a third opinion, Sir Farrer Herschell's, without giving any reason for discrediting those of equal authority, thereby doing, unwittingly no doubt, things not authorised by the Act. For legal opinions upon the interpretation of the Act are not the facts of cases, with which alone the Committee is authorised to deal. Neither, as we read the Act, is the Executive Committee authorised to deal with the question of legal opinions to the exclusion of their consideration by the General Council. Yet, in effect, the Council at its February meeting, was hindered from considering the relative value of the conflicting legal opinions by the direction of the solicitor, who appeared to associate the determination of the facts of the submitted cases of alleged incorrect registration with the estimation of the legal opinions, and denied the right of the Council to discuss the merits of either. This ruling was submitted to under strong protests, and to use the words of Mr. Simon, mechanical obedience was given on the spur of the moment, not without unwillingness.

In this unsatisfactory state of the question the Association was advised to take the highest available opinion upon a fully stated case. The late Sir John Holker, shortly before he became Lord Justice Holker, was, in conjunction with Mr. R. S. Wright, and Mr. G. A. R. FitzGerald (the draftsman of the Dentists' Bill), appealed to. The answers given confirmed the opinion previously given by Mr. FitzGerald, and it is not denied, also the opinion given by Lord Justice Bowen, namely, that those persons only were entitled to be registered who practised dental surgery either separately or

in conjunction with the *legal* practice of medicine, surgery or pharmacy.

Armed with this important additional evidence in favour of correction of the Register, the Association asked for a reconsideration of the whole question by the General Council in full session, when, guided by opinions, the highest the legal profession can furnish, it is hoped a satisfactory conclusion may be reached. It seems scarcely possible that the great lawyers Lords Justices Holker and Bowen can have been wholly mistaken in the legal interpretation of a phrase, the meaning of which to an ordinary mind does not admit of doubt. We may feel sure that persuasion, on the score of expediency, to support a mere colourable claim rather than discharge a disagreeable duty will be resisted and we should not fear that hasty action in the past will influence unfavourably a deliberate judgment in the future. That the General Council should itself exercise the power of judgment upon the facts of the cases ascertained by the Dental Committee and upon the legal opinions obtained for its guidance,—the value of each of which in this connection greatly depends upon the completeness of the cases submitted to counsel,—will be a matter of unmingled satisfaction to the dental profession, the members of which ask only that the Act should be administered with impartiality without regard either to colourable pretext or to professional exclusiveness, and that the Register shall give the names of, but shall not make, dentists.

The Value of a Specialist's Opinion.

WE published last month the particulars of a case of glaucoma which had been erroneously treated as facial neuralgia arising from the teeth. The case thus reported by Mr. Milles appears to us so forcible an illustration of the doctrine we are constantly upholding that we cannot forbear to comment upon it. A general practitioner is called upon to treat a case of pain in the face, he attri-

butes it to a few teeth-stumps and extracts them ; the pain does not yield to this treatment, and, when the patient is brought to Moorfields Ophthalmic Hospital because of an increasing impairment of vision, the pain is found to be due to an acute glaucoma. The result of this oversight was very serious to the patient, involving as it did not only the loss of her few remaining teeth, but the possible loss of an eye, and certain permanent impairment of vision. The possession of a text-book knowledge of diseases of the eye and of the teeth, nothing more than which can be expected, should lead a careful practitioner to desire a competent opinion to assist his inevitable inexperience. No one who has spent any time in special hospitals would dream of expecting any practical knowledge of diseases of the eye or the teeth of any value, from a man *because* he holds general qualifications. The time allotted to him to obtain his diploma in surgery and medicine is not enough for more than a smattering of ophthalmology or odontology, and although a couple of years spent at an ophthalmic or dental hospital would render him fairly educated in its speciality, very few can afford to spend nine or ten years upon their professional education. The practitioner, when called upon to deal with a case of obscurity, lying within the limits of a speciality, has the obvious resource of obtaining the opinion of one more experienced, and need not rush on in the dark until he finds too late that his experiments in unaccustomed directions have cost his patient the irreplaceable blessing of sight or the scarcely less important function of mastication. And whilst it is excusable that he should know little of the morbid appearances of the fundus of the eye, and be unable to tell a temporary from a permanent molar, seeing that it would have been impossible for him to have been properly grounded in these matters in the four years of study in addition to his general work, a sound general medical education should leave him in no doubt as to when the interests of his patient call for a consultation.

The Manchester Circular.

A QUALIFIED surgeon practising dental surgery has circulated among medical practitioners in the Midland counties a touting dental address, in which he sets forth the advantages of his own surgical education and deprecates as a lowering the Licentiatehip in dental surgery : he offers instruction in dental practice for a

moderate consideration and, furthermore, offers to medical practitioners a percentage of the fees obtained from patients sent by them to him,—one shilling in five in the case of artificial teeth, which are charged to patients at the rate of five shillings per tooth. The offer is by many recipients deemed an unmerited insult. An effective appeal on behalf of the profession has, we understand, been made to one of the medical authorities, and it is probable that we shall hear no more of this trade circular. The Royal College of Surgeons in Ireland is enabled by its charter to remove from its register the name of any Fellow, Member, or Dental Licentiate who has recourse to professional advertisements, and other medical authorities are not destitute of controlling power.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting of the Association.

THE Annual General Meeting of the Association will be held in Liverpool on Friday and Saturday, the 25th and 26th of August. Gentlemen wishing to read papers or make casual communications are requested to send particulars to the Hon. Secretary at 40, Leicester Square, London, W.C. There will be demonstrations given in the rooms of the Liverpool Dental Hospital. Gentlemen wishing to take an active part in these clinics are requested to send particulars as above.

JAMES SMITH TURNER,
Hon. Sec. British Dental Association.

Western Branch.

THE Annual General Meeting of this Branch, which includes the counties of Devon, Cornwall, Dorset, Somerset, Gloucester, and Hereford, together with South Wales, will be held at Cheltenham, on Saturday August 5th, R. Rogers, Esq., President, in the chair.

Members who intend to read papers or casual communications, or to exhibit improved dental appliances, are requested to send notice to the *Hon. Local Secretary*, Dr. Poate, 1, Royal Crescent, Cheltenham.

Subscriptions, which are now due, should be forwarded to the Hon. Treasurer, J. T. Browne-Mason, Esq., 6, Southernhay, Exeter.

Gentlemen desirous of joining the Branch are requested to communicate with

W. V. MOORE, *Hon. Sec.*
15, Princess Square, Plymouth.

The Representative Board and the Coming General Meeting.

THE Board met on Saturday the 3rd inst. The prospects for the Annual Meeting were considered as highly favourable, and we hope to publish a preliminary statement of the business in our next issue. Three papers have been already promised, by Messrs. C. S. Tomes, W. Bowman Macleod, and Henry E. Sewill, respectively. We hope to be able to announce the title of each in our June number. The rooms of the Liverpool Medical Institute have been generously placed at the disposal of the Committee for the meetings of the Association. The Committee of the Liverpool Dental Hospital have also acted in the same liberal manner, and in the rooms of the Hospital a series of demonstrations will be given by members of the Association from different parts of the country. The gentlemen who have already promised their services are: Messrs. H. C. Quinby, of Liverpool; L. Matheson, Manchester; G. Cunningham, Cambridge; and C. Claude Rogers, London. James Macintosh, Esq., of 42, Queen's street, Edinburgh, was elected a member of the Association, the Hon. Secretary stating that twenty names had been added to the roll since the last meeting.

Midland Counties Branch.

ANNUAL GENERAL MEETING, held at LEEDS, April 26th.

The members having reassembled at 2 p.m., Mr. Stewart, the newly-elected President, delivered a short address, thanking the members for the honour they had conferred upon him.

Mr. J. MURPHY showed models of a case of chronic inflammation of the anterior portion of the alveolar border of the upper jaw, confined to the space between the canine teeth. The patient, a servant girl aged 20, looked as if she was suffering from a severe attack of periostitis, affecting one of the upper centrals, her lips being much swollen. She stated that she had first noticed a slight swelling of the gum about two years before, but although she had suffered at times, she had not applied to anyone for

advice till then. On examination the teeth were found to be firmly fixed in their sockets, but pus was oozing from between the necks of the teeth and the gum; the latter was very sensitive, and bled profusely on the slightest touch. It was this which had caused her to apply for treatment. On passing a fine probe under the gum a well-defined band of tartar could be felt; it was thickest on the labial aspect of the teeth. This Mr. Murphy proceeded at once to remove, at the same time scarifying the gum freely; three sittings were thus occupied, and, after each operation, Mr. Murphy, having first dried the gum carefully, applied carbolic acid by means of a fine broach with a little cotton wound round the end, pushing it up round the alveolar border. He also ordered the following wash to be used after every meal: acid gallic 40 grs., liq. sodæ chlor. ʒii., glycerini ʒii., aquam ad. ʒviii. A cast was taken before the treatment was begun, another a month later, and a third two months later, when the treatment was completed. Mr. Murphy saw the patient again, six months afterwards, and found that the gums continued quite healthy.

Mr. Murphy then handed round a model showing irregularity of the left upper central and lateral; these teeth dipped quite behind the lower ones. The difficulty in this case was to get the central into position without, at the same time, pushing out the right central, the former tooth being partly under the lingual surface of the latter. Mr. Murphy removed the first left bicuspid; then he struck up a lower plate, capping the whole of the lower teeth, and used inclined planes as a means of pushing the upper teeth into position. This plan acted very well until the cutting edge of the upper struck the cutting edge of the lower teeth. When matters had gone thus far, everything seemed to come to a standstill, possibly from a lack of perseverance on the part of the young lady. Mr. Murphy then replaced the first lower plate by another, which capped the molars, and prevented occlusion of the front teeth; india-rubber bands were used to get the displaced teeth into position. This plate was only worn during the night, so that progress was necessarily slow, but eventually a satisfactory result was obtained.

A third case brought forward by Mr. Murphy was one in which the right upper canine was placed in the horizontal position, with the cusp pointing to the median line. The patient, a gentleman, aged about 50, applied to Mr. Murphy to have his mouth prepared for an upper denture. On examination, four or five

teeth and stumps in the front part of the mouth were found to be loose, and were removed, together with the bicuspid and first molar on the right side. The patient was then requested to call again in a couple of months; but in three weeks he returned, saying that he was cutting a tooth, and, close to the median line, a white object could be seen, which on close inspection proved to be enamel. After having ascertained the position of the tooth, Mr. Murphy proceeded to extract it by means of the elevator. This was not effected without a considerable amount of force, probably owing to the fact that the tooth had a sharp curve at the end of the root.

A discussion followed, in which Messrs. Blandy, Nicol, Williams, and others took part.

Mr. W. H. NICOL having made some remarks on the subject of "Saliva Ejectors,"

Mr. CRAPPER brought forward a proposal to establish a Benevolent Fund in connection with the Association. It was well known that appeals had been made from time to time to the profession for aid in cases of distress arising from sudden and unavoidable causes. It appeared to him that it would be far better to have a permanent fund to meet such emergencies, which would thus be provided for by mutual contributions. In this way gifts to a distressed member, or his family, would be deprived of much of that unpleasant character which was attached to those raised by direct appeals to individuals. The maintenance of such a fund was a recognised part of the work of all similar societies, and he thought they were now in a position to start something of the kind. He therefore proposed to the meeting that it was desirable that a Benevolent Fund should be established, and in the event of this being carried, he would further propose that a small committee should be appointed to prepare rules for the management of the Fund, towards which he should be pleased to contribute the sum of ten guineas.

Mr. SMITH TURNER said that they would all appreciate the motives of Mr. Crapper in regard to the proposed Benevolent Fund. This was one of the objects of their Association, and Mr. Crapper would be pleased to know that such a scheme was contemplated when the society was formed; but its feasibility had not yet been made apparent. A committee had been appointed to consider the subject, and they had made a report on the subject to the Representative Board. He hoped they would live to see the

establishment of such a Fund as Mr. Crapper suggested ; but, at present, he did not quite see his way clear to its accomplishment.

Mr. CRAPPER then showed some models which had been sent to him by Dr. Barratt, of Buffalo, U.S., in exchange for a duplicate of the model of the very perfect jaw of a Zulu, exhibited by Mr. Crapper at the meeting of the Branch, at Liverpool, last year. One of these was the model of the mouth of an old coloured woman, named Sojourner Truth, now aged 104 years, who was well known all over the Northern States of America as a Baptist preacher, temperance lecturer, etc. Another was a model of the mouth of an American giant, named Bates, who is 8 feet 2 inches in height. The third was very remarkable: it showed the upper and lower jaws of a youth, aged 20, in whom the crowns of the teeth were congenitally absent. The masticating surfaces were smooth, highly polished, and of a mahogany colour ; there was no appearance of caries whatever. The peculiarity was hereditary, the patient's father and great-grandfather having had a similar form of dentition ; but the grandfather's teeth were normal, and, out of a family of several children, this youth is the only one who has inherited it. The abnormality has, up to the present time, been confined to the male members of the family.

Mr. T. S. CARTER next read the paper on "The Causes of the Increasing Degeneration of Human Teeth," which appeared in our last issue. At its conclusion,

Mr. SPENCE BATE, F.R.S., said that while the lecturer was reading his paper he mentioned the name of a man whose remains at that moment were being put into the ground. He did not think that any naturalist would deny that we owed a great deal to the late Charles Darwin. He (the speaker) had known and corresponded with him for more than thirty years, and he certainly felt that if he had not pledged himself to come to Leeds that day, he should have regarded it as his duty to have allowed hardly anything else to have precluded him from attendance at the grave-side of the deceased naturalist ; for he looked upon him as one of the great men of modern times. The subject on which Mr. Carter had spoken in his paper was one that would be really of interest to those who took up the study of the evolution of species. He thought that the lecturer, in his paper, which was an able digest of the subject, and which was well worked out, had, notwithstanding, missed one extraordinary point in the force of his argument as to the reason why teeth were getting contracted

in space and lessened in size. In his (Mr. Spence Bate's) opinion it was because the jaw was decreasing in size. It was a fact that, from the lowest form of animal life, up to the highest development, the jaws were always contracting and receding. If they compared the monkeys of the old world with those of the new, they would find that the former had three pre-molar teeth on each side, whilst the monkeys of the latter had only two. This seemed to show that there had been a race of monkeys earlier, in which there was a larger number of teeth than those that existed at present in the old world; and in all these they would find that there was room in the jaw for the teeth to develop. But as man had become civilised the jaw had decreased, and, according to the law of evolution, the nervous centre had increased in power and size. The human jaw was decreasing, but to what extent this would go on he was not prepared to say. Not only were the wisdom teeth disappearing, but even some of the incisors also in numerous instances in modern man; therefore, it seemed to him, that they found a decrease taking place, not only in the size of the teeth themselves, but that they were being crushed into a position too small for them. He had not had enough experience to enable him to go fully into the subject, but it appeared to him that not only were teeth becoming crowded out, but that a change was going on in their actual structure. He had examined microscopically teeth from ancient cairns or graves, as well as those of the Africans, North Americans, and Esquimaux, and they all showed a density of structure—the tubuli being small and fine—such as was found in the most perfect ivory of the hippopotamus. Comparing these with modern teeth it seemed to him that not only were the tubuli in the latter larger in size, but the structure was mixed up with numerous inter-globular spaces, the connective tissue of which was the seat of the pain felt in the dentine. He remembered a case in point: he had to operate on a remarkably sensitive tooth, and he could see at the bottom of the decayed portion, a little white spot, which was, he had no doubt, an inter-tubular space, which always looked black when viewed in the ordinary way through a microscope. When he put the instrument upon the spot it was exceedingly painful, but anywhere else there was no pain. He thought that human teeth were much more sensitive now than formerly,—he spoke from an experience of forty years,—and that changes were going on in the human mouth, and in the struc-

ture of teeth, of such importance, that it would be well if every one of those present would give attention to the matter.

Mr. G. V. RIDOUT, of Leeds, asked Mr. Spence Bate if he had found that warmer climates made teeth much less sensitive than they were in the more northern climates. In Portugal, Spain, and even in Madeira, for instance, he had noticed teeth to be very little sensitive indeed.

Mr. SPENCE BATE said his experience of civilised individuals from tropical climates was very slight. He knew that they occasionally got into their hands persons whose teeth might be drilled through and through without any sensibility. He believed that the whole structure of teeth was not sensitive; but he believed they would find that the membranous walls of the interglobular spaces were in connection with the nerve centres, and it was these apparently which were so exquisitely painful.

The PRESIDENT, having proposed a vote of thanks to Mr. Carter, concurred in the observation that there was no doubt that, as civilisation progressed, the nerve centres in the teeth would become more sensitive; it was unfortunate that it should be so.

Mr. GEORGE BRUNTON, of Leeds, then read the paper on "The Conservation of Children's Teeth," which will be found at p. 254.

In the discussion which followed, Mr. MATHESON said he agreed with Mr. Carter's paper that one of the principal causes of dental caries was mal-nutrition. He would, however, like to ask Mr. Spence Bate whether he did not consider, in his theory of the loss of density of the teeth, that it was going on throughout the whole race, independent altogether of the influences pointed out by Mr. Carter, but owing to those influences which tended to the development of brain power and nervous tissue. It would be interesting if they could obtain statistics as to whether the present style of living really did affect the teeth. These statistics might be formed by saying what sort of a bringing-up a child had had, and whether there had been a precocious mental development. With regard to data, he did not actually possess tabulated records, but he had been very much struck, in looking over the mouths of some hundreds of children in industrial schools, that invariably a large proportion of the children who went there at the age of six or seven years had miserably poor temporary teeth, and, as a rule, had first molars; but of the children remaining at these schools until they were fourteen or fifteen, an astonishing proportion, as a

rule, had remarkably good second teeth. He thought the reason was, that probably that class of children, before going into these schools, led an irregular life, and were probably miserably fed. But more than that, although one did not often think of children having much anxiety, yet these children, owing to the life they led, had a great strain upon their nervous system, apart altogether from the poor nutrition of their bodies ; and that with the regular life of these schools, good nourishment, and the simultaneous development of mind and body, their second teeth had been better than their first. It seemed as if there was some truth in the theory which both Mr. Carter and Mr. Richardson had advocated in their papers, and which was held by others of greater name.

Mr. SPENCE BATE said, as Mr. Matheson had appealed to him, he would observe that he thought they had a great future before them in the matter of discovering the cause of dental caries. They were aware that, the other day, Mr. Milles and Mr. Underwood brought forward a theory at the Medical Congress which should be well studied. For his part he could scarcely admit that Mr. Underwood was correct, possibly, because he had a baby of his own. Many years ago he (the speaker) brought forward a theory, which was recorded in the "Proceedings of the Odontological Society," that dental caries originated from nascent carbonic acid formed in the mouth, and that idea had never been controverted. Whilst the oxygen and carbon were in combination in the mouth they formed carbonic acid, where coming in contact it dissolved the lime. He believed the want of density in the teeth was due to the absence of lime. He also came to the conclusion that teeth were capable, under certain conditions, of absorbing materials through external means, which would harden them. For a long time he tried the introduction of silica for the purpose of hardening the tissues ; but he never found out whether any benefit was derived, because, as they knew, patients often escaped their notice, and it was only in hospitals and dispensaries they could work out a matter of this kind satisfactorily. But, as a general body, their duty was to find out cases, and compare them with each other, and try to discover means to keep off the decay in teeth. Mr. Underwood said they must endeavour to destroy bacteria ; but bacteria were only injurious when they fixed upon dead matter. Every moment they breathed germs which would be death to them if they were in a condition to be injured by them ; but they were harmless when they kept themselves in a

position to repel them. He again repeated that he believed it was the absence of lime that superinduced the decay of teeth.

Dr. WALKER (London) thanked Mr. Carter for his elaborate paper. He might say, as far as his practical examination went respecting the teeth of children confined in schools, and of those who had had the free run of the country, it was entirely opposed to Mr. Matheson's suggestion. His former experience among children in the West Country was that the deciduous molars were never decayed. He had thousands in his surgery which had been thrown off by nature, but which were perfectly sound and solid. He had been in the same neighbourhood this year, and had hardly been able to find a sound six-year-old molar in a whole family. In former times these children never got to any school, excepting the dame's school, before they were six, seven, or eight years old, and they spent plenty of time in running in the fields. Where iron entered into the composition of the water drunk in a certain district, he found that the teeth there were much softer than children's teeth in London; but when the children passed into schools, where they had pure air and pure water, their later teeth became very much better than were the six-year-old molars. This might account for the result Mr. Matheson had spoken of; for if the change were due to the want of pure air and pure water that the children in the West of England used to get, he thought the question was somewhat solved. It was the impure water, bad living, and confined rooms that produced decay in the later teeth greater than was found in the six-year-old molars.

Mr. MATTHEW (Derby) supplemented Mr. Matheson's observations by saying that he found that improved diet, fresh air, and pure water to make the second set of teeth a great improvement on the first.

Mr. MATHESON thought the statement he made not at all incompatible with that made by Dr. Walker, and that both statements tended in the same direction. In the first place, he (the speaker) spoke of industrial schools, and not of Board schools, and that when children were admitted into the former a change of life took place. He gathered from Dr. Walker that he spoke of children he used to see as living a more or less healthy life, in which there was not existing any excessive nervous development; he went into the same neighbourhood now, and found an excessive development of the nervous system, to the disadvantage of the other part of the system. He (the speaker) found precisely the same

thing, only the cases, in the children he had observed, were the reverse of those Dr. Walker had observed. His experience was that an improvement in the teeth took place under an improved condition of existence. With regard to Mr. Spence Bate's theory, as to the absence of lime, that also he considered compatible with Mr. Underwood's theory with reference to bacteria, as the damage that might be done by bacteria was made possible by the absence of lime.

The SECRETARY then read Mr. Richardson's paper on "The Second Fall of Woman," which will be found at p. 258. At its conclusion,

Mr. CAMPION said that, before they terminated what had been a very interesting meeting, he would take the opportunity of proposing a vote of thanks to the Leeds Medical Council, who had kindly lent them the use of the rooms at the Leeds Medical School for the purpose of their meeting.

Mr. E. J. LADMORE (Leeds) seconded the vote of thanks, and said that the Medical Council had done all that they possibly could to promote the success of the gathering.

The motion was unanimously adopted.

Before the conference was dissolved,

The PRESIDENT appealed to the members to visit Liverpool in August, to support their late President, the parent society having done him the honour of electing him to the high position of President of the Association. He (the speaker) and the Secretary (Mr. Waite) held out to the members a hearty welcome. He hoped that the annual meeting of the parent society would prove a great success.

ORIGINAL COMMUNICATIONS.

On the Conservation of Children's Teeth,

BY MR. GEORGE BRUNTON, Leeds.

MR. PRESIDENT AND GENTLEMEN,—This is a subject which I have for many years felt to be very important—one which we shall do well to discuss with all the earnestness and zeal which we can bring to bear on this, so far, much neglected subject, and it is a subject, gentlemen, which needs no apology for bringing under your notice, for is not the child the father of the man? and if the

teeth of children do not receive all the care they require during childhood, what condition are they likely to be found in when they reach maturity? Moreover, it is admitted on all hands that there is great degeneracy of the teeth, each succeeding generation showing a softer type of tooth structure than the one which preceded it; this being so, are we not called upon at once to bend all our powers in the direction of Conservative treatment? and while it is our duty to try and find out the cause or causes of this degeneracy, yet the duty which lies nearest to us at present is undoubtedly the conservation of those organs on which proper mastication, perfect speech and, to some extent at least, good looks depend. If we are specialists in the healing art, we must not be content simply with the indiscriminate extraction of the teeth of the first set, consoling ourselves with the reflection that the permanent teeth will come by-and-bye and fill up the gaps made by our cruel forceps, but we must, if we would be what we call ourselves, try by every means in our power to preserve the first set until they are one by one, in a natural manner, replaced by their successors of the second set. Very few parents know that the sixth year molar is a tooth of the second set, and the consequence is, many thousands of those teeth are extracted because they get so hopelessly decayed there is no doing anything else for them. If parents only knew the important function of the sixth year molar, they would not allow their children to be robbed by medical men (who ought to know better), chemists and (save the mark) by dentists, of those teeth, the extraction of which causes disfigured jaws and impaired mastication. Of course I know and admit that many sixth year molars have to be extracted to give room for the other teeth of the second set, and to prevent the lateral pressure which is found to be such a fruitful source of decay.

But, gentlemen, important as are the functions of the sixth year molars, I hold that the functions of the molars of the first set are much more so, and will try to prove it to you. I now hand round for your inspection two models taken from the same child's mouth at the same sitting, in the first you will observe the deciduous second molar is in place, note the large space filled by the molar compared by that required for the second bicuspid. All this space is required for and taken up by the first molar of the second set, as you will see by the left side of the model, where the first permanent molar has come forward, and is now filling all the

space hitherto occupied by the second deciduous molar ; you see the importance of preserving the molars of the first set until the bicuspid of the second set are erupted. I want you also to see the malpractice of extracting those deciduous molars when they might be retained by judicious treatment until their natural function is performed. The importance of this subject is well illustrated in Mr. Coleman's Manual and in Mr. Norman Kingsley's Oral Deformities.

If confirmative evidence were wanted in support of the statement that the sixth year molar moves forward, I might cite the fact of the tendency that the sixth year molar has to move forward when decay occurs in the distal aspect of the second bicuspid.

Now the treatment to prescribe is clear in this matter, *save the deciduous molars until the bicuspid are erupted*, as to the method of saving these teeth when decayed, stopping them will at once suggest itself. I would even go further than this, and suggest that when those teeth are decayed beyond the hope of stopping them, they be so treated that the roots remain, and to a certain extent preserve the much wanted space. The method of doing this, which I have used for some years, is a simple one, consisting of dressings (repeated every second day) of cotton wool dipped in a solution of carbolyzed resin, to which one-third of eucalyptus oil has been added. When the decay is not deep, but has spread over the crown denuding it of enamel, the treatment advised by Mr. Coleman is good, viz., thorough cleanliness, and the application of salvolatile and spirits of wine, which hardens the bone and prevents further decay.

In the treatment of children's teeth, it is always advisable to avoid giving pain if we would have them return willingly to us for further treatment, sharp excavators (I prefer the spoon shape) and Fleming's aconite are good helps in this direction. I seldom do anything of a painful sort to a child the first visit, but try to gain its confidence ; that gained, a good deal can be done.

A good amalgam on gutta percha filling serves very well for teeth of the first set. It is not easy to apply the rubber dam for children. I find the Osborne Tongue Holder an excellent thing, keeping the mouth dry, and the tongue although kept out of the way has plenty of freedom to move about inside the porcelain cup.

Many cases of irregularity may be put right by the patients themselves under proper direction: for instance, I had a case in

which the upper central incisor was locked inside the lower teeth, which was brought out to its place by the child persistently pressing it outwards with the handle of a spoon. Much may be done by simple contrivances in correcting irregularities: waxed floss silk with very weak india rubber rings adjusted so as to act slowly, and allow the sockets to get firm and hold the teeth in place after they have been moved is a favourite method with me. I would strongly deprecate the employment of regulating plates which have to be tied in, as more harm than good is likely to result by the action of pent up food and fluids of the mouth on the teeth covered by the plate.

Accidents often occur to children's teeth. I was called to see a child that had fallen and struck its mouth against an iron fender, driving the left central incisor into the jaw, so that all that was to be seen was the cutting edge; I concluded to leave the tooth in, and apply soothing lotions, and had the satisfaction of seeing the tooth gradually come down to its place.

I have seen many cases where the three or four incisors in the upper jaw were the only ones decayed and could only account for it by the action of the india rubber teats in bottle feeding. Extracting the teeth of children should as far as possible be done without pain, and for this purpose I find the application of dichloride of ethidine on cotton wool to the gum a good thing. When many teeth have to be removed chloroform is in my opinion the best anæsthetic for children. I should like to say something about the *cultivation of fear* in children; as regards dental operations. They are often taught to dread the dentist, instead of looking on him as their friend, they regard him as their enemy: the comic papers do much in cultivating fear of the dentist; in one a child is represented as being dragged into the dentist's house, and a young arab standing by calling out to him, "eh, won't it scaunch when he gets hold of it with his pincers." Now this sort of thing may account in some measure for the dread of dental operations in patients in after life.

While we do all we can to diminish the dread of dental operations, we should not forget to teach little patients the importance of thorough and regular attention to cleaning their teeth at night; a word in season should also be given to the parents on this head, and also on providing their offspring with food suitable for the formation of good bone, and in conclusion I would recommend all

to advise their patients to avoid dentists who advertise ; there must be something revolting to properly constituted minds in the exhibition of those horrid dental show-cases which disfigure our streets and railway stations, and let us by all means try to elevate our profession in the minds of the people.

The Second Fall of Woman.

By F. RICHARDSON, L.D.S.I. & Eng., Derby.

THE failure of the human teeth to fulfil the purpose for which they were ordained, (for a machine which breaks down almost as soon as set going can hardly be regarded in any other light,) is a subject which demands the closest investigation at the hands of the Dental Surgeon, and the most serious consideration of every intelligent member of the community. To attempt, as some do, to lay the blame upon Nature is simply absurd ; for where is our standard of perfection to be found if not in her ? For never yet did Nature make a mistake, either in design or handiwork ; any apparent failure being due, not to her, but to the folly or ignorance of her wayward children. And among the many evidences of this fact, the un contemplated decay of the teeth affords a notable example.

"How is it that the loss of the teeth is now so universal ?" is a question constantly being asked in every dental surgery, and "How is it that you dentists, with your wonderful diplomas, are unable either to assign a cause or suggest a remedy ?" Supposing the question addressed to myself, and my querist a lady, young and fair accordingly, I tell her that most dentists have theories of their own on the subject, and that I have mine. Dentistry, I assure her, should like charity begin at home, for there it is preventative, whilst with us it is too often only reparative. Pressed yet further, I read my fair patient a short homily on what may be termed the civilization theory ; confining myself, however, to the fringe of the argument. I duly expatiate upon the wonderful properties of whole-meal bread and oatmeal porridge—enlarge upon the merits of hard crusts, tough beef-steak, and the admirable oral gymnastics, or jaw drill involved in their discussion—impress upon her that I hold correct views as regards the premature education of children, and am opposed to their too early vaccination ; concluding my remarks with a little fatherly advice adapted to the occasion. If my querist is a staid matron of forty summers or thereabouts, I seize upon the opportunity instantly, and politely inform her that,

in my humble opinion, it is the sex so admirably represented in herself that is answerable for—Heaven knows how much of the mischief. Warming with the subject, I give my hobby his head, and—forgetting my patient altogether—continue my discourse to an enlightened universe.

In our endeavour to solve this mystery of dentistry, we find—

1st. That savage nations are exempt from the affliction of dental caries.

2nd. That (consequently) it is confined to the civilized portion of the human race.

3rd. That the women of civilization are more liable to its ravages than the men are.

To attempt to account for this on the ground that because women are physically weaker than the opposite sex, they are therefore more susceptible of disease, is to accuse Nature of a strange blunder. Were this indeed the case, what becomes of the doctrine of evolution, the struggle for existence, and the survival of the fittest? I therefore venture to think that we must look in another direction, and ascertain whether women are not consciously or unconsciously disregarding some one or more of the laws of nature to an extent that would account for the apparent anomaly.

A walk of a dozen yards along any public thoroughfare solves this part of the difficulty, for the victims of FASHION are to be found everywhere. Look at that wasp-waisted girl, literally tight-laced to death, as were perchance her mother, and her grandmother before her. There is not an organ, not a portion of her body that is not suffering more or less from the repressed development, compression, and displacement of such vital portions of the human system, as the heart, lungs, liver, &c., with the addition of perhaps one or more of the seventy and nine diseases which this pernicious practice is said to give rise to.

Ask any woman why it is that she practises such enormities upon herself, and she will tell you among other things that it is done to improve her figure, or that the body requires support. Improve the figure! when every line is (or rather *was*) beautiful, and past all criticism! Have we not in those Greek statues, amongst which the Venus of Milo holds the foremost place, the most perfect type of female beauty? Then turn to these, ye wayward daughters of Eve, intent on improving your first mother's fair proportions, and from these dumb marbles (they were Goddesses in their day), learn the full measure and extent of this your

SECOND FALL. And when by your blind worship of this modern Moloch, you have so weakened and enervated your bodies, that you are compelled to wear what but in name is a surgical instrument (a *thoracic splint* in fact), does it not occur to you, that you are supplying the very best of evidence against this practice of tight-lacing?

In the great scheme of development, commencing in that border land where the animal emerges by imperceptible stages from the vegetable, to that far off future where under the name of the Millenium, the work of evolution is accomplished, the struggle for existence proceeds,—the fittest surviving, and the weakest dying out. Man, recognising the result, adapts the principle to his money-making ends, and by careful attention to certain facts is enabled to develop in animals and plants almost any desired trait or quality. Breeders of horses, cattle, &c., select the finest, healthiest, and best developed specimens for the sires and dams of their future stock, no trouble being considered too great to ensure superiority. But man in the rearing of his own progeny, never gives the smallest thought to these things. The most improper marriages are contracted, as though the only interests to be considered were those of the parties immediately concerned. Instead of selecting for the mother of his children a healthy, well-developed woman, he takes one upon whom, perhaps, Fashion has already done her worst, and her children are, as the Registrar-General describes them, so degenerate, that out of every seven born, one dies before it is twelve months' old. Many mothers at the present day are incapable of suckling their infants; and here is another illustration of the evils of tight-lacing. Through the pressure on the parts the mammary glands are denied development, and there is good reason for believing that the compression which the entire thorax and its contents are subjected to, has an equal share in the mischief. Dr. B. W. Richardson, in a paper read before the Odontological Society on the 7th of November, 1881, stated that according to his experience the chief constitutional causes of dental caries were syphilis and dyspepsia, and he admitted that it was difficult to say which was the most important. The worst form of dyspepsia he considered was that induced during early infancy by the substitution of artificial foods for the mother's milk. He once thought that the effects of dyspepsia in producing caries were only developed during the period of infancy, and he still

thought that this was the most common time for the commencement of the evil.

It would thus appear that the Fashion of the present day has a direct tendency to unfit women for the greatest of all her duties, viz., that of becoming a good mother, notwithstanding which for a space of nearly two years her child is dependent upon her—for development before birth, and for nourishment after. As regards the softer tissues which are subject to constant destruction and reconstruction, it is conceivable that any injury sustained by them might in time be overcome. But with the teeth it is different. While the rest of the body only becomes fully developed after a long course of years, the teeth, made as it were to contract, are completed in a comparatively short period, and once formed, know of no alteration; consequently any inherent weakness clings to them for life, leaving them at the mercy of the numerous adverse influences which Civilization and Fashion have provided for their destruction.

What is done cannot be undone. If these wayward wives will persist in propping up their weakened bodies and ruining their constitutions in consequence, by all means let them continue to do so, but let the folly end here. Let nothing induce a father to consent to his daughter being sacrificed to this modern Moloch. Let him bring her to his way of thinking by explaining to her the folly, nay criminality of the practice. Let her go to a school where elementary physiology is thoroughly taught, and encourage her to study the subject for herself,—to attend health lectures, and in every way prepare herself for the inevitable duties of the future. And let parents, in the words of Herbert Spencer, recognise that the first duty they owe to their children is to make "*good animals*" of them. And till this is done, I for one refuse to believe in the possibility of any diminution in the amount of dental caries.

By way of postscript, I would draw attention to a few facts which I desire to emphasize, viz:

Men are proud of their constitutions, which they endeavour to develop to the utmost. Women on the contrary appear to be only anxious to prevent the development of theirs.

Women's teeth are more susceptible to dental caries than men's: and it would seem as though the *mammæ* were becoming (and not very gradually) incapable of fulfilling the purpose for which they were created, a fact which would seem to point to their ultimate suppression, seeing, that, according to the great teacher who has

just left us, such is the fate of every organ not put to the full and proper use for which it was intended. So also with the spine and muscles of the back ; through the persistent use of artificial appliances for several generations, the latter are relieved to a great extent from supporting the body, and suffer accordingly.

Surely here is sufficient to account for many of the diseases which beset the civilised world at the present day, including that particular one, to successfully combat which our best energies are devoted.

In thus bringing the subject before this Association, I have to ask the kind indulgence of my fellow members for any shortcomings contained in this paper, which has been written at odd times, often when other matters were claiming my attention.

HOSPITAL REPORTS AND CASES IN PRACTICE.

A Case of Erosion.

By A. S. UNDERWOOD, M.R.C.S. and L.D.S.ENG.

EROSION has been attracting considerable attention recently in dental circles, especially since the excellent paper upon the subject read last autumn by Mr. Coleman. As the subject is still a very obscure one I think the particulars of a very marked case may be of interest. The patient was a lady of middle age ; until within two years of my first seeing the case she assures me she had not noticed anything peculiar about her teeth. Some considerable mental trouble and anxiety was speedily followed by the appearance of the first traces of the remarkable changes which I am about to describe.

The only teeth that are not affected by the process are the molars (of which four remain) ; from the right to the left second bicuspid, upper and lower, every tooth is eroded. The affected surfaces are hard, yellow and brightly polished. One lower bicuspid which I was obliged to extract was attacked on all five surfaces ; it appeared exactly as if each surface had been removed in slices, and rendered thereby nearly an exact cube with a little enamel at the corners. The lower and upper teeth were all affected both on the inner and outer surfaces ; sometimes the destruction looking like a slice off the surface, sometimes like a shallow groove, running irregularly over it, causing a somewhat wormeaten appear-

ance. The erosion was rarely confined to the necks of the teeth. In the two upper centrals the groove ran straight from the edge of the gum to the cutting edge of the tooth. In the lower laterals the necks alone were affected; in one case the pulp chamber was open (the nerve being dead). In three or four of the teeth caries was going on at the same time; this was the case in the one I extracted, of which I obtained some good sections. The reaction of the surfaces was always very acid, even just after a meal. The patient had never worn artificial teeth, nor had she taken much medicine. The sections showed no enlargement of the tubes at the eroded surface; there were no organisms to be seen at all until the carious portion came into view, which presented the usual appearances. The main point of interest in the case was that it differed entirely from caries in this respect, that whereas caries destroys the dentine much faster than it does the enamel, causing excavations laterally underneath the enamel, erosion destroys the enamel much faster than it does the dentine; having gained access through the enamel to the dentine, it does not spread laterally in the latter tissue, but continues its work of destruction upon the enamel. It seems, therefore, that while a tissue almost all lime salts is readily destroyed by the active principle of erosion, a tissue one-third organic matter is more accessible to the ravages of caries. I think an insurmountable objection to the purely chemical theory of caries is, that if dentine and enamel be exposed to destruction by an acid, the acid, effecting its work by decalcification, must produce more complete destruction in the enamel than in the dentine, because while destroying only 73 parts in 100 of the dentine it eliminates 96 from the enamel, especially as the enamel, being outside, is the first to suffer. In an artificially decalcified tooth the enamel is utterly disintegrated and can be washed off with a stream of water, leaving the dentine only rather elastic. The hypothesis that Mr. Milles and myself first broached last autumn at the Congress, namely, that, in addition to the numerous predisposing and exciting causes of caries, there was one element which gave to it its special characteristics, and without the co-operation of which it would cease to be caries, namely, the presence of certain micro-organisms, seemed to throw some light upon the fact that this process is more extensive in its ravages in the softer and more organic of the two tissues; the pabulum for organisms must be organic. Perhaps the disease known as erosion may be the effect

of a simple acid decalcification assisted by the friction produced by the tongue, lips and saliva.

REVIEWS AND NOTICES OF BOOKS.

Mechanical Dentistry. By CHARLES HUNTER. Second Edition, 264 pp., 102 Woodcuts : Crosby Lockwood, 1882.

WITH the great development and immense additions to the resources of modern mechanical dentistry, its special literature, at least in this country, seems for a time to have shrunk, and for the last few years to have been at a standstill. This, the second edition of a popular little book (with the exception of a few remarks upon celluloid) appears to be almost identical with the first issue, which appearing in 1878 as "specially practical," was a compilation chiefly remarkable for its omissions, and the conciseness rather than the variety or originality of its information. It is instructive to observe in successive works of this kind, the gradual diminution, to final disappearance, of all account of the nature and construction of artificial teeth, till in such handbooks as the one we are specially referring to, not one word as to their structure, properties, or manufacture can be found. This may be an advantage to the student, and small loss to the worker, but both will also look in vain for any hint on the construction of regulating plates, reference to steam or hydraulic swaging, description or even allusion to cast bases, newer methods of pivoting, and many other useful and almost essential labour-saving developments of the mechanical department of the profession ; and to the workman it is distinctly an added grievance to find instead of what he seeks, misleading or imperfect details copied from other books, which a little bitter experience will convince him that the "practical compiler" was personally ignorant of. We suppose, also, that a little guidance or suggestion in artistic or æsthetic considerations of form and colour (in alas quite too utterly "artificial" affairs) is quite beneath the "practical" man. A redeeming feature (of what otherwise would be a book as useless to the self-taught observant mechanic as misleading and incomprehensible to one who would learnt his craft from it), are the excellent and useful tables of chemical data, physical constants and empirical formulæ which Mr. Hunter has added, but we are surprised that the receipts of alloys, &c., of precious metals are not

decimalized, or that this notation so convenient in calculation, and so generally adopted commercially, is not explained or referred to.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

Odontological Society of Great Britain.

At the usual monthly meeting of this Society, which was held at 40, Leicester Square, on Monday, the 5th inst., Mr. S. Lee Rymer, President, in the chair, the Secretary read a letter from Mr. George Darwin, thanking the Society for the vote of condolence passed at the last meeting.

The Curator acknowledged the receipt of several additions to the museum, including the skulls of a male leopard, of a sloth bear, and of a tiger, from Mr. O'Meara, of Simla; two curious specimens of salivary calculus, from Mr. T. R. Whatford, of Newcastle; and a model showing transposition of the canines and bicusps on both sides of the mouth, from Mr. Wilson, of Edinburgh.

MR. CHARLES TOMES showed the skull of a dog, twelve years of age, which had been sent by Mr. E. M. Tod, of Brighton. The teeth generally were much worn, but at the front of the jaw some small incisors were to be seen in process of eruption.

He showed also a lower wisdom tooth which had belonged to a patient of Mr. Wallis. At the extremity of each of the roots was a deep groove, amounting to more than a semicircle, which had evidently contained the inferior dental nerve. The tooth, the crown of which was carious, was buried in the gum, and had to be extracted with the elevator; the operation was followed by complete paralysis of the parts supplied by the inferior dental nerve.

MR. STEVENSON then demonstrated his method of making steel springs, which, for the exceptional cases in which the use of springs was necessary, he found much more satisfactory than the gold ones generally used.

MR. W. HUNT, of Yeovil, then read a paper on "Celluloid." He began by apologising for the "lowliness" of his subject. In his opinion mechanical dentistry did not receive at the hands of dental societies as much attention as it deserved. In spite of increased knowledge and increased skill, disease of the teeth appeared to be on the increase, and the forceps were constantly being called on to remove useless organs; practitioners were ex-

pected to do their best to supply the deficiencies thus caused, to enable their patients to masticate their food, and to put an end to a long train of discomforts, or even serious diseases, which were liable to arise from this cause. He considered that the idea that mechanical dentistry was beneath notice, was due to false pride. The study of an art which conferred such admitted benefits on our fellow creatures was, he contended, not beneath the notice of educated men, nor of a Society whose aim it was to advance in every way the knowledge of dental surgery.

No subject had during the past few years excited more interest, or caused more disappointment, than celluloid. A base which should be strong, life-like, durable, on which artificial teeth could be mounted in such a manner that each individual tooth could be placed in the position best suited for the special requirements of the case, had long been a desideratum. It would be admitted by all that celluloid was in appearance infinitely superior to any other base except continuous gum work. This latter was heavy, liable to fall, and if broken or chipped, very difficult to repair. It required much time and skill in making, and the materials were costly, putting such a plate beyond the reach of many patients.

On the other hand it must be admitted that many serious difficulties were at first met with in the working of celluloid. These were well summed up in a paper by Dr. Eben Flagg, published in 1879, and entitled "Why Celluloid does not succeed." He said "if we go on working celluloid in the manner which we have been taught, it will be a failure, because there has been no apparatus that will fulfil the conditions required for the production of a perfect plate. These conditions are as follows:—(1) No steam, oil, or other foreign substance must be allowed to come in contact with the material whilst it is plastic, or it will discolour. (2) During the process of pressing, one portion of the blank must not be colder than another, or it will warp. (3) The material must have its form changed at a temperature much higher than is now used, otherwise it will have a tendency to return to its original form. This heat must be obtained in an apparatus that is air-tight, for if the super-heated material can obtain oxygen, either in the form of air or vapour, it will surely burn."

He (Mr. Hunt), was pleased to bring before the notice of the Society, a machine which fulfilled all the conditions asked for by Dr. Flagg, conditions which further experience since 1879 had shown to be absolutely necessary for the successful manipulation

of celluloid. In this apparatus (Dr. Campbell's) you could obtain in a *dry* chamber an equal heat all round the flask, you could obtain any amount of heat you required, and could maintain it equably for any length of time. You could, through a glass door, see all that went on inside the chamber, and could take out, or put in, your flask instantly. His machine was fitted with one of Gartrell's pressure gauges, which he considered much more reliable than a thermometer; it showed the amount of steam pressure, as well as the inside temperature of the boiler, and regulated automatically the supply of gas. His plan was to get an accurate plaster model of the mouth; from this he made a tin model, on which the celluloid was moulded, all surfaces which would be in contact with the plaster investment being protected with tin foil; prepared in this way, the surface of the finished plate was much harder and smoother than when manipulated in the ordinary manner.

After considerable experience with Dr. Campbell's machine, he had been convinced that by its intelligent use a whole catalogue of difficulties, which had obscured the path hitherto, would be dissipated. Practitioners living in London enjoyed great advantages in obtaining early information of all improvements, and to many of those present the subject of his paper might not be new; but there were so many, like himself, whose opportunities of learning were limited, that he hoped the favoured few would forgive him if he had wearied them in his attempts to benefit the many.

During the reading of the paper, Dr. Campbell placed an entire upper set, which he had previously prepared, in the apparatus, together with a celluloid blank. In five minutes the flask was screwed down, and in ten minutes more the piece was taken out, removed from the flask, and handed round for inspection.

Mr. FELIX WEISS remarked that Mr. Hunt had said a good deal about the apparatus, and very little about the properties of the material. He (Mr. Weiss) thought this was the most important part of the subject. The apparatus was probably an improvement upon its predecessors, though the plan of moulding celluloid by dry heat was not novel, but he doubted whether any apparatus would overcome what he believed to be the inherent faults of the material—its tendency to shrinkage, to double and flake, and the difficulties of adding to, or repairing it. Then there was its tendency to change colour. It also wore away more

easily than rubber, it would become frayed even by the action of the tongue. Rubber, as they all knew, would last twenty to twenty-five years without change, but he had not yet met with a celluloid plate that had been tested for half that time. On the whole, he could not see what was to be gained by substituting celluloid for rubber.

Mr. VANDERPANT, of Kingston, said that during the last four years he had occasionally used one of the Dental Manufacturing Company's machines, and with success in some cases, but he felt bound to admit that he had had almost as many failures.

Dr. WALKER said he had obtained one of Dr. Campbell's machines in August last, and had used it constantly ever since with the most satisfactory results. Of course six months was too short a time to judge of the durability of the plates. There was one caution to be observed: celluloid plates must never be placed over old roots, these must all be extracted. His previous experience of this material had not been satisfactory, but he believed that if Mr. Weiss would try the apparatus now before him, he would find that the difficulties he had spoken of had been successfully overcome.

Mr. WILLIAMS gave an amusing account of his experiences with celluloid. At first he had many failures, but after a time was more successful. He found it did best in edentulous cases, but was liable to become much worn by attrition. Last year he replaced thirty celluloid plates, of his own manufacture, by vulcanite, and should have been glad to have done the same for other patients if he could have ascertained their whereabouts.

Mr. STEELE, of Croydon, said his previous experience of celluloid was the same as Mr. Williams's, but since using Dr. Campbell's machine he had seen reason to change his mind. All the cases prepared with it had been successful, and he found that the celluloid had increased density and a better surface.

Mr. F. CANTON spoke to the same effect.

Mr. CHARLES TOMES remarked that though the opinions expressed had been favourable, they were based too much on general impressions and on the experience afforded by a very short trial. They were useful as far as they went, but he should like to hear some more exact data as to changes in the composition of the material, loss of camphor, its specific gravity before and after heating, its breaking strain, &c. If he had these, and the statistics derived from, say, fifty pieces which had been worn for a consider-

able time, he should feel able to form an opinion, but at present he was not altogether convinced.

Mr. HUNT in replying said he had not troubled himself about the chemical constitution of celluloid, he could only speak of the practical results obtained with it. Mr. Tomes criticisms were true enough, but it would take six years, instead of six months, to obtain them. What had been stated by himself and other speakers that evening would, he hoped, be sufficient to induce others to experiment for themselves.

The Society then adjourned till November.

National Dental Hospital.

THE Annual Distribution of Prizes to the Students attending the school attached to this Institution took place at the Beethoven Rooms, Harley Street, on May 31st, the Right Hon. Viscount Enfield presiding.

The Dean (Mr. Thomas Gaddes) announced in his report that during the past year there had been six full and thirteen partial entries; whilst three students had obtained the L.D.S.Eng., three that of Edinburgh, and four that of Ireland; not one had failed.

The Prizes were then presented to the successful students by the Chairman. Mr. A. H. Mountford received the Rymer Gold Medal for General Proficiency; Mr. W. J. Pigeon obtained the Medals in Dental Mechanics, and in the Dental Surgery and Pathology Class; Mr. Morgan Hughes receiving Certificates of Honour for both subjects; Mr. Hughes obtained the Medal in the Dental Anatomy and Physiology Class; Mr. Mountford receiving the Certificate. In Operative Dental Surgery their positions were reversed, Mr. Mountford obtaining the Medal. In Metallurgy the Medal went to Mr. A. P. Penrose, and the Certificate to Mr. Chas. Rose; the same gentlemen received the Medal and Certificate respectively for the summer course of Dental Mechanics. Mr. Carter received a prize for the best piece of mechanical work.

The Chairman then delivered a short address, in which he said that he had been President of the Institution for 21 years, and felt proud of the position he occupied. He took great interest in its affairs, and considered that it had been conducted on sound and economical principles; whilst from personal inspection of the working arrangements, he could speak highly of the kindness, skill, and attention which the patients received at the hands of the Staff.

Mr. OAKLEY COLES proposed a vote of thanks to the Dean for the capability and devotion he had shown in conducting the business of the School during his term of office.

Mr. WILLIAMS seconded the resolution, saying that Mr. Gaddes had been found to be the right man in the right place, and that the success of the school had been very much due to his exertions.

This having been carried, Mr. GADDES briefly replied.

Mr. RYMER then proposed a vote of thanks to Lord Enfield for presiding that evening, acknowledging at the same time how much the hospital had been indebted to him during the past twenty years.

This was carried with much applause, and closed the proceedings.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Maternal Impressions and Congenital Deformity.

At the May meeting of the Odontological Society, a discussion took place on the subject of dental operations upon pregnant women, and incidentally the question of the possible effects of shock to the mother in influencing the development of the foetus was debated. The following extract will be read with interest. It is an able summary of the evidence bearing upon maternal impressions, and it supports the view expressed at this meeting, namely, that the popular notions on this matter are not based upon science. We take the excerpt from the just published admirable work of Mr. Noble Smith on the Surgery of Deformities.* This book will well repay the perusal of those specially working at the subject of deformities of the jaws. Although it does not deal specifically with this topic, there are many points connected with the origin and pathology of deformities generally which have a connection with those of the jaws and neighbourhood.

"MATERNAL IMPRESSIONS.—The belief that a maternal impression can produce deformity *in accordance with the idea of the mother*, has a very ancient origin, and is entertained by many medical men at the present time. It therefore becomes necessary to state the following facts which are in opposition to such belief:—

* London : Smith, Elder, & Co.

- "1. That the resemblance of the deformity to the object which has impressed the mother is generally an imaginary one.
- "2. That the maternal impression is almost invariably only alluded to *after* the discovery of the deformity.
- "3. That the ovum, as soon as it leaves the ovary, ceases to be connected, either by the nervous or vascular systems, with the mother, and therefore, in resembling very closely the egg of an oviparous animal, becomes almost equally unlikely to be influenced in the manner referred to.
- "4. That from the nature of the deformity we may usually know that the error in formation must have occurred at a much earlier period than the date of the supposed cause, and this is especially the case when the error is one of excess.
- "5. That, in the words of Dr. Blundell, 'it is contrary to experience, reason, and anatomy, to believe that the strong attention of the mother's mind to a determinate object or event' can cause 'a specific impression upon the body of the child without any injury from without.'

"A great shock to the mother, even if only a mental one, may affect the general condition of the foetus, may retard its development, or may even cause its death; but that the mother's mind being affected by the sight of a deformed or injured hand, lip, or other part of the body, can produce a malformation *of a corresponding part of the body of her child in utero*, is a supposition which physiological facts will not allow us to entertain.

"If it be thought necessary to pursue this subject further, the only manner in which reliable evidence can be obtained is as follows:—The observer must question each mother *before delivery* as to any impressions she may have formed upon the subject, and compare these with the actual condition of the child when born. It is probable that nearly every pregnant woman entertains doubts and fears with regard to the condition of her coming offspring, and that when her child is born in a normal condition, all apprehensions are soon forgotten, but that when an abnormality exists, the fear is magnified into an important fact.

"In past ages congenital deformities were attributed to various causes, amongst which may be mentioned Divine vengeance, witchcraft, intercourse with animals, &c.; but the knowledge which we now possess of the various phenomena of embryonic

development enables us to determine that many deformities depend either upon *arrest* or *excess* of the processes of formation."

The Royal College of Surgeons in Ireland.

THE affairs of this College have lately given rise to comment and correspondence in the pages of the *British Medical Journal*. In an article which appeared in that paper on May 27th, the Editor called attention to a proposal made by the Council of the College to spend a large sum of money in enlarging the school attached to the institution, pointing out that its income, under ordinary circumstances, was very limited, and that the surplus now in hand was due to the "rather questionable granting of some hundreds of dental diplomas"—a source of revenue which would probably fail before long. This drew a reply from Dr. Kidd, a member of the Council, who does his best to show that the College will be in a position to pay off the proposed debt, even without counting upon a continuance of the present rate of issue of dental diplomas, together with several letters from those who object to the scheme. Amongst these is the following from Dr. Stack, of Dublin, which is of great interest to ourselves, since it not only helps to explain a good deal which has been hitherto obscure in the history of the Irish Dental License, but at the same time exonerates the dental members of the Council from certain charges which have been brought against them:—

"TO THE EDITOR OF THE 'BRITISH MEDICAL JOURNAL.'"

"SIR,—In your issue of May 27th, there occurs, in a leading article on the Royal College of Surgeons in Ireland, the sentence, 'But for this interest, and the money obtained last year from the rather questionable granting of some hundreds of dental diplomas, the College would be absolutely in debt.' As a few of the Fellows of the College express indignation at the phrase 'questionable granting,' and, as I consider that the course adopted by the College during the past year, and indeed for some time previously, fully warrants this phrase, I purpose to write a few words on the subject. About one feature of the granting of the dental diplomas there can be no question, viz., that a large sum of money has been realised to the College by this procedure. In the earlier years of this diploma-granting, matters had a greater show of decency than during the past year. Many highly respectable practitioners came up for examination at the beginning; but, before long, this source of income was exhausted. The capability for diploma-granting did not, however, cease, when ceased the candidates of acknowledged respectability. Druggists' assistants

—nay, I am told hairdressers and others of that ilk—were received with open arms. The dental section of the Dental Board demurred, and exercised their right of veto, at the meetings of the Board of Censors, to exclude the chemists and druggists. Forthwith the right of veto was taken from them, and the Council took unto itself the admission of candidates to examination. These circumstances make many of the Fellows think that the honour of the College has been seriously impaired. If it be asked why this was done, the answer is, a certain section of the Council knew that the College needed funds, and, by hook or by crook, must get them. The Fellows at large were never consulted on this dental traffic, nor was the opinion of the Fellows of the College practising dentistry asked or taken. One thing is now certain; even of the hairdressers and druggists' assistants there is an end, and some other scheme must be evolved to meet any extraordinary expenditure on the part of the College. Unless such can be devised if extraordinary expenses are to be incurred, the day of general collapse is certain and inevitable.—I beg to remain, faithfully yours,

“R. THEODORE STACK, F.R.C.S.I.”

Deaths from Syncope after Tooth Extraction.

Two cases of this, fortunately, rare accident which have been recorded in the journals within the last few months, call for some notice from us, in order to remind our readers of the *possibility* of such an occurrence. The first took place at Marseilles on the 20th of October last, and is thus described in the December number of *Johnston's Dental Miscellany*:—

“Gustavus Zach, a Swiss by birth, and about twenty-six years of age, called upon M. Koch, a dentist, native of this place, for relief from the pain of an offending molar. An attempt, that appears to have been only partially successful, was made to remove the diseased organ. The shock of the operation produced a fainting fit of so alarming a character that a physician was called. After the application of the usual restoratives the patient revived and wished the operation continued. The physician and dentist both attempted to dissuade him from this determination, but without avail, and preparations were accordingly made for the termination of the operation. His nervous apprehension was, however, so great that before the instrument could be introduced into his mouth he relapsed into a state of syncope, from which all efforts failed to revive him. As all attempts to again restore him to consciousness gave no promise of success he was removed to the hospital, where he shortly drew his final breath.

"A post mortem examination revealed the fact that death was the result of cerebral congestion, supposed to have been super-induced by the emotion attendant upon the operation. Some congestion of the lungs also existed, together with slight pleuritic adhesion, but this was only incidental, and had no immediate influence in hastening his demise."

The second case is taken from the *Lancet* of March 18th, the contributor being Mr. W. R. Williams, F.R.C.S., Surgical Registrar at the Middlesex Hospital:—

"When in charge of a friend's practice at Bristol some time ago, I received one day a very urgent call to proceed at once to a neighbouring dentist's. On arriving there I found a stout woman, aged fifty, lying on the consulting room floor, insensible; the face pale and of a faint purplish tint, the pupils equal and of about normal size, the breathing feeble and quiet, the pulse and cardiac movements imperceptible. The woman, an old patient of the dentist, came that morning, apparently in her usual health, to have a decayed bicuspid tooth extracted. Being well aware that she had a weak heart, he refused this time, as he had done on several previous occasions, to give her any anæsthetic. In the presence of the patient's friends the tooth was easily drawn without it; but a few minutes afterwards she 'went off in a faint.' Failing to revive her, he sent at once for the nearest surgeon. In the course of about five minutes I arrived, and at once examined the throat for a foreign body, but failed to detect anything, and was assured that her artificial teeth had been removed before the operation commenced, the complete set being now produced. Every available means was tried to restore her, but in vain. A little later her own doctor arrived, under whose care she had been for several years. He was well known to me, and I can place implicit reliance on his statement, which was to the effect that she had suffered for several years from palpitation and shortness of breath, without having had any murmur or other sign of organic heart disease.

No post mortem examination could be obtained. It was evidently a case of death from syncope, resulting from the shock of extracting a tooth. Had an anæsthetic unfortunately been administered, the death would certainly have been attributed to it."

Amongst the collected works of Sir James Simpson, edited and republished in 1871 by his son, Sir W. G. Simpson, will be found a valuable paper on the subject of death from syncope after slight

operations. In this he mentions the case of a patient who died after the setting of a fractured radius, of a child who died suddenly after the opening of a cervical abscess, and of "a robust man of middle age" who fell back and expired immediately after the opening of an abscess in the thumb. Sir James says, and gives some evidence in support of his assertion, that deaths from syncope during, or just after, operations were not very uncommon before the introduction of anæsthetics, though rare since; and he suggests that some, at least, of the deaths which are credited to these agents are really due to the shock of the operation, which is greatly mitigated, but not entirely avoided by the use of an anæsthetic.

Development of the Teeth in Whales.

In the March number of the *Revue Odontologique* we notice a short report of a meeting of the Société de Biologie, at which M. Paul Bert presided, and M. Pouchet (whose name is familiar to us from his connection with the *Journal de l'Anatomie et de la Physiologie*) gave the results of some interesting investigations into the evolution of the teeth of whales. He had brought back with him from his Arctic voyage some fetuses, 30, 90, and 120 centimetres in length, and in these he has succeeded in following the transformations of the enamel organ and the dentine organ. He demonstrated, first, that the enamel organ is not closed, but is open at its upper surface, only leaving on the side of the tooth the *débris* of its external layer, which has, so to speak, burst. In the later stage (90 centimetres) the teeth were found deeply buried, and crowned with a cap of dentine, destitute, up to this point, of tubes. The internal layer of the enamel organ seemed on the point of disappearing. No formed enamel could be found, a fact which seemed to suggest that the production of enamel is dependent upon the integrity of the enamel organ. At a still later period the dentine was found riddled with holes, through which the pulp tissue was in direct communication with the soft tissues surrounding the tooth.

Prosecution under the Dentists' Act.

THIS case being of some interest as the first prosecution which has been instituted under the Dentists' Act, we give below a verbatim report of the proceedings:—

At the Marylebone Police Court on 31st of May, Charles Smith, of 94, Praed street, Paddington, was summoned by the Medical

Alliance Association for falsely taking a name, title, or description implying that he was registered under the Dentists' Act, 1878, and qualified to practise dentistry under or by virtue of such register.

Mr. C. J. Pridham, solicitor, appeared to prosecute ; Mr. Dennis, solicitor, watched the case for a Mr. Mallan, dentist.

The defendant did not appear, and Mr. Dennis said a person of the name of Mallan carried on business as Charles Smith.

Mr. Pridham said he must ask for a warrant. It was a peculiar case, and the first under the Dentists' Act. In 1878 an Act was passed to amend the law relating to dental practitioners, and the two main objects were to constitute a register for registration of dental practitioners, and to prevent any person from using the title of dentist who was not registered. The section as to registration stated "From and after August 1st, 1879 a person shall not be entitled to take or use the title of 'dentist' (either alone or in combination with any other word or words), or of 'dental practitioner', or any name, title, addition, or description implying that he is registered under this Act, or that he is a person specially qualified to practise dentistry, unless he is registered under this Act. Any person who, after August 1st, 1879, not being registered under this Act, takes or uses any such name, title, addition, or description as aforesaid shall be liable, on summary conviction, to a fine not exceeding £20, provided that nothing in this section shall apply to legally qualified medical practitioners." Section 5 said "A person registered under this Act shall be entitled to practise dentistry and dental surgery in any part of Her Majesty's dominions, and from and after the 1st day of August, 1879, a person shall not be entitled to recover any fee or charge in any court for the performance of any dental operation, or for any dental attendance or advice, unless he is registered under this Act, or is a legally qualified medical practitioner." The Act prevented a person from assuming the title of dentist, or from practising unless he was registered. The facts of this case were, as his association understood them, somewhat peculiar. At 94, Praed street, Paddington, there was a dentist's shop. On the door were the words "Mr. C. Smith, dentist," and the names "Charles Smith" appeared on the shop window, and statements were made that dental operations were performed, and that that was the first established shop in Praed street. (Mr. Pridham produced a photograph of the shop.) Subsection 4 of section 11 stated that "The dentists' register shall be deemed to be in proper custody when in the custody of the

general registrar, and shall be of such a public nature as to be admissible as evidence of all matters therein on its mere production from that custody." The copy which he had before him was in the proper custody of the registrar, and he put it in for the purpose of proving that there was no such person as Charles Smith, of Praed street, Paddington, registered. That was *prima facie* evidence under the Act, and Charles Smith was under a penalty of £20. He did not think it right to put his case any further than that at present. He did not know what the defence was, but he would prove his case.

Mr. Dennis said Mallan's name was over the door and he was registered. The prosecution could alter their summons and put in the name of Mr. Mallan.

Mr. Lushington (the magistrate): Is Mr. Mallan registered at that address?

Mr. Pridham: No, sir. It appears Mr. Mallan is at 173, Praed street, and my friend now comes and says Mallan is Smith and Smith is a myth.

Mr. Dennis referred to section 3, as to registration (quoted above), but

Mr. Pridham pointed out subsection 2 of section 11, which stated "The dentists' register shall contain the said lists made out alphabetically according to the surnames, and shall state the full names and addresses of the registered persons, the descriptions and date of the qualifications in respect of which they are registered, and, subject to the provisions of this Act, shall contain such particulars and be in such form as the General Council from time to time direct."

Mr. Lushington: As far as I understand it is said that Mr. Mallan is a registered practitioner in the same street and on the register, and is carrying on business with a false name and at a different establishment to that on the register. I should like to draw the attention of the Council to that being disgraceful conduct, and as to whether his name should not be erased from the register. I shall adjourn the case to let the Council consider whether it is not disgraceful conduct and whether his name should not be erased from the register.

Mr. Pridham said he would consent to that.

Mr. Lushington: In the meantime let the Council have the facts brought before them.

Mr. Pridham asked that the service of the summons might be

proved, and a warrant officer deposed to serving the summons on an assistant at 94, Praed street.

The summons was adjourned for four weeks.

OBITUARY.

MANY of our readers will regret the death of Mr. Everard, the well known and highly esteemed dental instrument maker, a man of strongly developed individuality, an artist by taste, a most skillful workman by natural aptitude cultivated with unbroken determination, a Frenchman by birth and education, general and special. During the first years of his residence in this country he was engaged for the most part in making lithotritry instruments, the use of which was at that time advocated and practised by M. Heurte-loup. In 1839-40 Mr. Everard made for Mr. Tomes numerous adjusted tooth forceps and with an unprecedented degree of accuracy and excellence of workmanship. Order followed order in quick succession, and ere long Mr. Everard's time was wholly occupied in meeting the wants of dental practitioners. From first to last through the forty-two past years every instrument passed through his hands, and in the great majority of cases each instrument was forged, filed and finished by himself. For he was by nature an artist who gave you his own work, not a salesman who vended the work of others. He could not grow rich by the work of his own hands, but he gained sufficient to meet his simple wants and to allow of his making by slow degrees a small collection of objects of art. Amongst these were to be seen many productions of his own. Such hours as the necessities of his position allowed were spent in modeling in clay or carving in ivory, in each of which occupations he attained considerable skill. He had an extensive knowledge of art generally and delighted to talk of engravers and engravings, of painters, especially of the old masters, with the works of whom he was well acquainted. Few Englishmen knew so well the contents of our national collections as did this Frenchman who settled amongst us without becoming one of us. He gave us, notwithstanding, the best years of his life, of his intellect, of his great manual skill unflinchingly, at all times, and on all occasions. Honour be to the name of this true man.

THE name of Mr. James Karran, of Douglas, Isle of Man, was accidentally omitted from the List of Members issued in January.

NEW INVENTIONS.

Dr. Chase's "Incisor Amalgam."

We have been favoured by the "Manipulator" with a sample of a new filling, described as "Incisor Tooth Amalgam," "personally manipulated" by Dr. Henry Chase, of St. Louis, Mo., U.S. It appears to be a carefully prepared sample of that type of alloy in which the mechanical properties desirable in a filling material are, to a certain extent, sacrificed for whiteness and non-discolouration of tooth-substance. Unfortunately, up to the present time, all such alloys are deficient in edge strength, toughness, and permanence in compound cavities. Dr. Chase's new alloy amalgamates readily, works smoothly, and if used as dry as all amalgams should be, sets rapidly; but has little plasticity or cohesion. A finished plug has a hard, fine surface texture, and white enamel-like appearance; but while the special properties of tightness and permanence of colour claimed for it only time in the mouth can test, we can fairly predict from an approximate analysis of its composition that, according to what is known of such amalgams, discolouration in this case should be reduced to a minimum.

*. We would take this opportunity of strongly urging the desirability of every preparation or material, submitted to us for trial and report, being accompanied by a statement of its nature and composition (which will not be made known without express permission), as a guide or check upon our own determinations. For, while without a knowledge of it, a preparation cannot be spoken of with confidence, the analysis we always freely and cheerfully undertake for our information is often (on account of the small quantity at our disposal) so merely approximate, that injustice may inadvertently and unintentionally be done.

APPOINTMENTS.

MR. A. M. MATTHEWS, L.D.S.Eng., of North Parade, Bradford, has been appointed Hon. Dental Surgeon to the Bradford Infirmary.

MR. ARTHUR COUNCELL, L.D.S.Eng., has been appointed Lecturer on Dental Metallurgy at the Liverpool School of Dental Surgery.

ANNOTATIONS.

WE earnestly call attention to the notice issued by the Hon. Secretary, which will be found at page 245, and trust that in our next issue we shall be enabled to chronicle a satisfactory response to his appeal.

IN addition to the member's ticket, we understand a special ticket is to be issued to every member for his private disposal. This ticket will admit the holder to the meetings of the Association and to the demonstrations at the Dental Hospital.

ARRANGEMENTS are in progress for giving the members of the Association an opportunity of dining together on Friday evening, the 25th of August.

WE learn with much satisfaction that energetic efforts are being made to form a Branch Association in Scotland, and that a meeting is to be held in Edinburgh on the 13th inst. for this purpose. We wish the promoters every success, and regret that circumstances prevent our giving an account of the proceedings in the present issue.

THE meeting of the Western Counties Branch, as announced in our Association Notices comes happily between the Midland Branch meeting and the general meeting of the Association. As branches multiply there will be fewer gaps of comparative idleness, and we trust that the managers of the different branches will arrange their times of meeting so as to prevent them overlapping each other and enable us by their judicious distribution to keep up the interest of the Journal all the year round.

AT a meeting of the Medico-Chirurgical Society, held on Tuesday, May 23rd, the various bacilli of anthrax, spirillum fever, and septicoemia, were exhibited, in addition to the very beautiful specimens of Koch's tubercle bacilli, which had been shewn shortly before, at the Royal Society's soirée, by Mr. Watson Cheyne. There was one preparation which was of especial interest to the dental practitioner: it consisted of pus from an abscess in which micrococci were flourishing, notwithstanding the free use of iodoform. This would rather tend to shake the con-

idence which is felt in iodoform as an antiseptic, and to throw doubt upon its value as a root dressing.

THE dental practitioners of Leeds have lately adopted a most excellent plan, which has, we know, been carried out with the best results by their medical brethren in several country towns. It consists in holding informal monthly meetings at one another's houses, at which the proceedings are almost entirely conversational. Cases are talked over, models and instruments shown, and general good fellowship promoted. No committee is needed, the members acting the part of host in rotation, or the place of the next meeting being settled at the preceding one. The plan might, we think, be followed in other towns of moderate size with great advantage.

AMONGST the names of those who obtained the Fellowship of the Royal College of Surgeons of England, at the examinations held last month, we are pleased to see that of William Charles Storrer Bennett, L.R.C.P.Lond., and L.D.S.Eng., of George Street, Hanover Square.

THE death of a gentleman, 72 years of age, occurred recently at Southsea under the following circumstances: He went down to the beach to bathe, and was found shortly afterwards floating on the water, face downwards. On examination it was found that his false teeth had become displaced and had blocked the windpipe, causing death from suffocation. Some people, apparently, come to value their artificial teeth so highly that they cannot be induced to part with them under any circumstances. It would, however, be a good thing if they could be prevailed to lay them aside when sleeping, bathing, or taking chloroform; a good many fatal accidents would thus be avoided.

Mr. Spence Bate writes to us complaining that his speech at the dinner of the Midland branch at Leeds, is so badly reported that he "cannot even recognise his own ideas," and adds that "the report as a whole does not do credit to the staff of the Journal." We have reason to know, from what we have heard from other sources, that the reporting on this occasion was not as well done as on previous occasions, but for this "the staff of the Journal" is in no way responsible. This, like all the other arrangements of the meeting, is entirely under the control of the secretary

of the Branch, and our sole duty is to print the report when we receive it. In this case it was also printed *as received*, with only such slight verbal alterations as were necessary to make it read easily. With regard to the meeting itself, it is, we know, very difficult, even in London, to get a reporter who can take down a technical discussion intelligibly ; but as regards the dinner we can only surmise that the gentleman who undertook the duty was not up to his work, or that he was very badly placed for hearing.

WE do not usually feel called upon to reply to the criticisms with which some of our contemporaries not unfrequently favour us, but the statements made in the last number of the *British Journal of Dental Science* are of so gross a character that we cannot pass them over without notice. One of the points thus commented on we have referred to elsewhere in this number. Another is in reference to Mr. Crapper's well-meant proposal made at the Leeds Meeting. Our contemporary states that, in our report of the meeting, we say only that "papers were read by Messrs. Murphy, Nicol and Crapper," but omits to mention that a few lines below occur the words, "a full report of which will appear in our next issue." Criticism of this kind can only recoil on the heads of those who descend to it. The *British Journal of Dental Science* has in the past done good service in the cause of dental reform and progress, we trust it may have an equally useful future before it,—the Dental world is large enough for both of us ; of the present perhaps the less said the better.

As the subject of "Water Motors" is just now exciting some interest, we give below an extract from a letter lately received from Mr. James Taylor, L.D.S.Edin., of Dewsbury, which may perhaps be of use to some of our readers:—"I procured from J. Pickard, Boar Lane, Leeds, a No. 3 'Empress' water motor, and have had it running over twelve months, and find it exceedingly useful in the workroom for polishing and grinding. It is fully one man power (and the power can be greatly increased in a few minutes), very substantially made, and has not cost anything for repairs, nor is it likely to do so. I think it far superior to any other small motor. Amongst its advantages are, no danger from explosion, no hot fires, or dirt ; it is always reliable, takes up no more room than the workroom lathe, requires no attention except oiling, runs very

steadily, and can be started or stopped instantly, and, so far, I have found no inconvenience with it whatever. I have only a moderate pressure of water from the town's main—about 50lbs. per inch—which is delivered through an injector having an $\frac{1}{8}$ inch jet, and the power raised by that small stream of water is a marvel. The first cost of the 'Empress' is small, and I pay an annual rate of £1 for water—using much or little, as I may require it. The tiniest stream of water is sufficient to run the Dental Engine at any speed."

At the Dental Hospital of London the number of cases treated last month was 3,156, including 1,753 extractions; of these latter 486 were children, and 402 were performed under nitrous oxide. There were 178 cases of gold, and 700 other fillings made; 140 cases of irregularity were treated, and 385 miscellaneous and advice cases were seen.

At the National Dental Hospital the total number of cases seen during May was 2,061. Of these, 1,164 were extractions, including 389 children, and 79 in which gas was given. There were 62 gold and 288 other stoppings, 75 cases of irregularity, and 472 miscellaneous cases.

At the termination of the meeting of the Odontological Society, which took place on the 5th inst., the last meeting of the session, Mr. Rymer again called attention to the fact that October 31st would be the last day on which practitioners who do not possess a diploma can be nominated as candidates for the membership of the Society. He added that after the very wide publicity which has been given to this regulation, it would be the individual's own fault if any eligible practitioner should find himself shut out from the membership of the Society.

AMONGST the antiseptic agents which would appear worthy of a trial at the hands of the dental profession, we may mention Resorcin. This is a very stable body of the Phenyl group, which is, we believe, generally prepared by distilling Brazil wood, but can be obtained in several other ways. It is a powerful antiferment and antiseptic, is freely soluble in water, free from odour, has no

caustic properties, and produces toxic effects only when administered in very large doses, 120 to 200 grs. at a time. These properties would appear to make it preferable in many respects to salicylic acid, carbolic acid, or thymol.

By way of postscript to his paper, printed elsewhere in this number, Mr. Brunton writes that he would wish to add a caution as to the use of aconite for obtunding the sensibility of children's teeth. It may be well to state that $\frac{1}{30}$ of a grain of aconitia will kill a dog. What is known as "Fleming's Tincture of Aconite" is six times the strength of the ordinary Pharmacopœia Tincture; even drop doses of this will, in some persons, cause faintness, with intermittent pulse and gasping respiration. Care should be taken in using aconite not to touch the lips, skin, or eye, as it produces great irritation. His mode of using it is to apply it on a small lock of cotton wool to the previously dried cavity, and then to cut away the dentine in the direction of the nerve fibrils, *i.e.*, towards the cutting edge of the tooth. A drop of the tincture on cotton wool is also useful for obtunding pain in an inflamed cavity after extraction.

THE sad accident at Preston, which we reported in our last number, has been the subject of much comment, both in dental professional circles, and in the medical press. We have received several letters on the subject, one of which will be found in this number. The lessons to be derived from it are, however, so obvious that we need add little to what we said in our last number. Perhaps the most important of these is the necessity for having some *reliable* assistance at hand in all cases where the administration of an anæsthetic is required. It should not be forgotten that in any emergency the friends of the patient are far more likely to obstruct than to assist the operator. Medical assistance is, of course, to be preferred when it can be had, since it greatly lessens the responsibility of the dental practitioner; but the presence of some assistant who is accustomed to the sight of such operations, and who can be depended on to have his wits about him when required, should always be secured.

A few months ago we commented on the use which is being

made in America of Dr. Bonwill's modification of the dental engine for general surgical purposes. Since then, our attention has been called to an important paper written by Dr. J. E. Garretson, of Philadelphia, and published in the March number of the *American Annals of Anatomy and Surgery*. In this he points out the value of the engine for the removal of carious bone, of epulis, and of exostoses; for trephining, for excision of the upper or lower jaw, in the removal of sequestra and other operations. The *Philadelphia Medical Times*, of February 11th, contains an account of two operations performed by Professor Garretson with this instrument; one being the removal of the coccyx, and the other an excision of the upper jaw. We cannot but think that our English hospital surgeons would find the Bonwill engine useful in many cases, if they could only be induced to try it.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—*Aprpos* of the interesting question raised by Mr. Sewill at the last meeting of the Odontological Society, viz., "the removal of teeth, under nitrous oxide, in advanced pregnancy," I think the following case may be of interest to your readers.

A lady from Oxfordshire visited me on the 14th of March last. She had suffered excruciating pain in the lower third molar of the left side, which she wished removed under gas, but I was informed by her husband that she expected to be confined in a fortnight. Now I was previously aware that this lady had been four or five times confined, at the full period, but had never given birth to a living child; still, as I entertained the views expressed by Mr. Sewill, that it was far preferable for the patient to have the tooth removed under gas than suffer the pain, which I have known to bring on a miscarriage, I willingly consented to its being administered to her, and removed the tooth.

On the 2nd of this month I was pleased to hear from her own lips that on the 1st of April last she had for the first time given birth to a living child—a son. She also told me on this occasion

that she came up to town without saying a word to her medical attendant, as she felt almost sure he would object to her taking gas, but on that matter she relied more upon my opinion.

As my patients are people of considerable property, this is a gratifying circumstance to them as well as to

Yours, &c.,

Streatham, May 10th, 1882.

ALFRED COLEMAN.

The late Fatal Accident at Preston.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Whilst sympathising with Mr. Miller and with the parents of the child who died during the operation, I would like to offer a suggestion which may possibly prevent a similar sad accident in future. It is simply to have a number of small sponges in readiness, each attached to a thin piece of bamboo (I use the outside laths of the cheap Japanese fans). These throat brushes, as I call them, are used by an assistant for pulling aside the tongue in operations on the lower jaw, thereby giving a clear view of the situation of the teeth to be operated on, removing blood and mucous from the throat, thus preventing, to a great extent, after-sickness, and, most important of all, being in perfect readiness to catch any tooth that may slip from the instrument. By the way it would be interesting to know what the condition of the child's mouth was to call for the extraction of such a large number of deciduous teeth. Mr. Miller says that "nine of the temporary teeth were obstructing the eruption of the permanent ones," and I suppose that the nine deciduous teeth would have been extracted if the accident had not occurred. I would like to protest against the wholesale extraction of the deciduous teeth which is going on. Probably Mr. Miller can explain why so many teeth had to be removed, and I hope he will do so, because others will think as I do that it is rather heroic practice. I may just say that during a long experience of private practice and also some years' attendance on the children at an orphanage, I have never met with a case which required the removal of so large a number of the teeth of the first set at one operation.

Yours very truly,

GEORGE BRUNTON.

Hillary Mount, Leeds.

British Journal of Dental Science,
11, New Burlington Street,
London, W., May 7th, 1882.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Please insert this to correct an erroneous and misleading statement which appears in the annotations of your last issue. You say "the gentleman who has just accepted the editorship of the *British Journal of Dental Science*, will be the fourth who has occupied that position within the last two years." What *will* be I am unprepared to say, but as to what *is*, I can state that I am but the third in some *three and twenty years*, and I believe the *fifth* from its commencement more than a quarter of a century ago. I should be very sorry for the *British Journal of Dental Science* to receive credit beyond its due, and in this respect it has I know been completely outstripped by your own journal, which seems to have had the same number during an infinitely shorter existence.

Yours, &c.,

EDITOR OF THE BRITISH JOURNAL OF DENTAL SCIENCE.

•• The above letter, although dated May 7th, only reached us after the last number of this Journal had been made up, and when there was matter of greater importance already waiting for publication. In reply we can only repeat that it is a fact that within the last two years the BRITISH JOURNAL has been *conducted*, shall we say, by four different individuals, of whom Mr. Charles James Fox was the first, and the present editor (?) is the fourth. If these gentlemen were not editors, then we do not understand the meaning of the English word "to edit." But, as we remarked last month, how many editors the *British Journal of Dental Science* may have had in the last two, or in the last twenty, years is a matter of but little interest, and no importance to us, or to our readers.

As to the meaning of the last portion of the letter we are not at all clear. We may say, however, that the gentleman who took charge of this Journal when it became the property of the Association is still the responsible Editor; with the changes that may have taken place before that time we have nothing to do. When Mr. Coleman found himself compelled to resign his position as co-editor, it was thought that an editor and sub-editor, acting, as before, in conjunction with a Journal Committee, would be in some respects a more satisfactory arrangement than that of two joint editors, living perhaps at some distance from each other.

And that is how matters stand at present. We give this explanation simply for the information of our readers, and shall not trouble ourselves to notice any further remarks which our contemporary may think fit to make on this subject.—E.D.

BOOKS AND PAPERS RECEIVED:—

HUNTER'S *Mechanical Dentistry*, 2nd edition; *Giornale di Corrispondenza dei Dentisti*; *Revue Odontologique*; *Dental Advertiser*; *El Progreso Dental de la Habana*; *l'Odontologie*; *Missouri Dental Journal*; *Dental Register*; *Le Progrès Dentaire*; *Lancet*; *British Medical Journal*; *Transactions of Odontological Society of Great Britain*; *London Medical Record*; *Ohio State Journal of Dental Science*; *British Journal of Dental Science*; *Dental Record*; *Independent Practitioner*; *Vierteljahresschrift des Vereins Deutscher Zahnkünstler*; *Birmingham Medical Review*; *Items of Interest*, &c.

Communications have been received from Messrs. W. M. Fisher, Dundee; T. S. Carter, Leeds; Henry Sewill, London; F. Richardson, Derby; Augustus King, Exeter; W. H. Coffin, London; James Taylor, Dewsbury; George Skliros, London; W. V. Moore, Plymouth; George Brunton, Leeds; A. S. Underwood, London; Alfred Coleman, London; Joseph Arkövy, Budapest; William Hern, London; Fred. Bate, London, &c.

ANSWERS TO CORRESPONDENTS.

"ONE OF THE OLD SCHOOL":—We noticed the paragraph to which you refer, but considered that it was sufficiently answered by the article which appeared in our last number. We agree with you in thinking that the bulk of the profession have little sympathy with the claims which were put forward by a few individuals at the meeting of the Odontological Society. There will probably be an opportunity of discussing the subject more fully at the meeting of the Association at Liverpool.

Mr. SPENCE BATE, PLYMOUTH:—We regret the annoyance which has been caused you, for which, however, we are only indirectly responsible. Others of the company, some of the medical visitors in particular, were almost as badly treated as yourself, though the errors are less obvious.

J. T.:—Thanks for the extract, which is, however, scarcely suitable for this Journal.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street E.C.

In order to avoid trouble and additional expense, Members of the Association residing abroad are particularly requested to send in their Subscriptions without waiting for a formal application to be made to them by the Treasurer.

The attention of Members is specially directed to the notices referring to the Meeting of the Western Counties Branch on August 5th, and the Annual General Meeting of the Association on August 25th and 26th, which will be found at pages 295-297.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

NO. VII.

JULY 15, 1882.

VOL. III.

Correction of the Dentists' Register.

THIS important question has been brought by the Association under the consideration of the members of the Medical Council, without any conclusive result. They were approached as a tribunal of equity, and asked to decide between high conflicting legal opinions, which gravitated in favour of correction. Under the lead of Dr. Quain and the Solicitor to the Council, they assumed the position of defendants, and wrongly designated the unrepresented Association "plaintiffs." For the information of the newly-elected members of the Council, Dr. Quain volunteered to give a history of the Dentists' Act, and availing himself of the opportunity, took the position of an advocate, and gave a statement in which historical facts were subordinated to desires and opinions; important actions were omitted from the narrative, and allegations made which needed, and in some cases received, subsequent correction.

The Solicitor continued the history in the spirit of a defendant's advocate. He said that he had submitted the opinion of Sir John Holker and his associates to Sir Farrer Herschell, and asked him for a reconsideration of his opinion, with the almost necessary result—a confirmatory opinion, viz., to the effect that the words "either separately or in conjunction with the practice of Medicine, Surgery, or Pharmacy" are without meaning, are useless, and superfluous. But on interrogation, it was admitted that he had not submitted to Sir Farrer Herschell, Lord Justice Bowen's opinion, alleging as a reason for not doing so that that opinion was given before the Register was formed, and before the facts ascertained by the Dental Committee were determined. This statement is difficult to understand, for he gives the date of this opinion as March 3rd, 1879, a time at which the Register had not only been formed, but at which four-fifths of the dentists had been registered therein, and also after some doubt had arisen as to the legality of registering chemists' and doctors' unqualified assistants, upon the claims of whom to registration it is admitted that Lord Justice Bowen gave an adverse opinion which agrees with that of Sir John Holker and his associates. Then, as regards the essential facts of the cases ascertained by the Dental Committee—they amount to this, that the names of certain persons, as alleged, were not to be found in the Chemists' and Druggists' Register, or in the Medical Register, but their absence was, or by simple reference might have been, known when Lord Justice Bowen's opinion was taken; and we presume that it was upon the legality of their registration (with other points) that he was consulted. Dr. Quain laid great stress upon the fact that £600 had been spent in dealing with the four hundred names submitted to the Dental Committee, but he did not refer to the equally obvious fact, that, assuming

Sir Farrer Herschell's opinion, upon which the Council has acted, to be correct, this heavy expenditure was a needless and lamentable waste of money. For the opinion was taken upon the reading of the Act, which is not altered by the cases upon which it bears; and even if determined cases were necessary, the investigation of two or three typical ones would have served the purpose just as well as the costly inquiry by the Solicitors into the individual, and for the most part parallel claims of three or four hundred persons. Dr. Storrar, in an unanswerable speech, proposed that the several opinions should be placed upon the Minutes, with a view to their full consideration by the Council. This was opposed on the ground that the Council need take no account of opinions which they did not themselves obtain. Yet they did enter in their Minutes, March 5th, 1879, the opinion of Mr. G. A. R. Fitzgerald, obtained by ourselves upon another point, and by us placed at their disposal.

It was alleged that if names which they admitted to registration were now erased from the Register, the Council would be subject to endless litigation. No one, however, ventured to contend, either that the initial registration had been judiciously conducted, that the Register was correct, or that the opinions of Sir John Holker and his associates, and of Lord Justice Bowen, were unworthy of confidence, but the concordance of these opinions upon rights to registration was admitted. It was also admitted that the latter opinion had been disregarded, and it was urged that the former might with convenience be ignored. The Council had, under legal advice, placed the questioned names on the Register, and were within their rights, technically, in refusing to enter upon the consideration of the suggested erasure, unless placed under the pressure of a judicial decision, towards the attainment of which, regarding themselves as defendants, they declined to render any aid. Thus,

in discussing whether or no Lord Justice Bowen's and Mr. Fitzgerald's opinions, and that of Sir John Holker, Mr. Wright and Mr. Fitzgerald should be entered on the minutes, the opinions themselves were more or less discussed, and their substantial agreement established and made public.

So far, the end of the Association has been answered. The duty of drawing the attention of the Council to what, on the highest attainable legal opinion, is believed to be incorrect registration, has been discharged. The absurd allegation that the leading dentists wish to act oppressively to the lower order of practitioners needs no refutation. The assertion that the Dentists' Act was not brought, as desired by the Medical Council, into conformity with the Dental Section of the Government Medical Bill, is answered by a letter from the Government's Counsel, published in the Councils' Minutes (July 1, 1878), wherein he says the amendments in the Dentists' Act, amounting to a third of the whole Act, proposed by the Government, "place the Dentists in the same position as they would be in if the Government Medical Bill passed with the dentists' clause in it." This letter was read by Dr. Storrar on Saturday, in refutation of Dr. Quain's statement to the contrary, made on the previous day.

Setting aside the unwillingness of the Medical Council to enter upon the consideration of the proposed correction of the Dentists' Register, in the face of the terrible threat of endless legal proceedings should they venture upon debatable ground; setting aside, then, the consequences of the legal scare, very great services have, during the present session, been rendered in the cause of dental registration and education. Practising under an assumed name has been condemned as unlawful and unprofessional; a forfeited licentiateship has been erased from the Register; medical qualifications have been ordered to be entered as

additional qualifications in the Dentists' Register; the question of apprenticeship, raised by Professor Turner, has been satisfactorily settled; and the Association has been empowered to prosecute in two cases, in which persons who not being registered have taken the title of dentists. To one or more of these subjects we may have occasion to refer on a future occasion. In the meantime we would direct the attention of our readers to the very carefully reported and highly important proceedings of the Medical Council, of which a full record will be found in subsequent pages.

Our Scottish Branch.

WE publish with pleasure in this number the report of the meeting at which the Scottish Branch of the British Dental Association was established. The majority of the gentlemen present seem to have at once recognised the advantages of being closely associated with the main body, and in their bye-laws this Branch has at once adopted the principle that all its members must be members of the British Dental Association. By so doing, they have adopted the bye-laws of the Association, so far as the qualification for membership is concerned, thereby avoiding unnecessary inconvenience and complications. We feel assured that this new Branch will be an additional source of strength to us, and again we wish it a hearty success.

The Medical Acts Commission.

SINCE the publication of our last number the report of the Medical Acts Commission has been issued.

Although the recommendations of the Commission on the present system of medical licensing are rendered almost useless by the dissent of more than half the number of the commissioners from various parts of the report, and although the result of their forty sittings may thus be disappointing to the medical profession, the British Dental Association, if also in a measure disappointed in what they consider their legitimate aspirations, have no cause for dis-

satisfaction in the treatment which they have received at the hands of the Royal Commission.

Owing to the unsatisfactory manner in which Dental Registration had been conducted by the Medical Council, and the marked determination of a party in the Council to discredit the Dentists' Act in the eyes of the medical profession and of the public generally, by allowing, without due inquiry, a large number of persons to register themselves as Dentists on the most flimsy and even impudent pretexts, it was deemed expedient by the Representative Board to empower their chairman, in giving his evidence before the Royal Commission, to put forward a claim for the direct representation of our profession on the Medical Council. This course was further rendered necessary by the manner in which the Medical Council had avoided referring to the British Dental Association, or to any representative body of the profession, for information regarding certain dental questions which were brought before them, by the persistent disregard shown by the Dental Committee to much important matter pressed upon them by the Representative Board of the British Dental Association, and by their evident disinclination to avail themselves of the power of reference and assistance given in section 15 of the Act.

The reply of the Commission to the request we made, *vide* Report, p. 9, section 6, clause 64, is that "we cannot recommend that this should be granted."

On referring to the resolution of the Commission regarding the constitution of the Medical Council, we can readily see the grounds of this conclusion. The present number of members of the Council, including the President, is twenty-five, and at page 5 of the Report, after reviewing the shortcomings of the Council, the Commission proposes—section 2, clause 21—that the "Medical Council shall consist of eighteen members." In the face of this suggestion, it may have been difficult for the Commission, on the grounds of consistency, to have recommended the concession for which we applied. Meanwhile our claim is on record, and the future action of the Medical Council will either strengthen or diminish the force of our application. Certainly, the treatment which we have more recently received from their hands, respecting the correction of the Register, has, we regret to say, most strongly demonstrated the reasonableness of our position.

To us, another interesting point in the Report is section 6, page 9, clause 23, which is as follows :—"The Association of Surgeons

practising Dental Surgery appeared before us by their President, asking that qualified dentists not on the Medical Register should be prevented from styling themselves 'Surgeon-dentists'; we do not see our way to make such a recommendation."

As we do not in any of the recommendations of the Commission see any obstacle to the concession of this request, we must conclude that it is refused solely because it has been unsupported by anything like a show of reason or justice, and the Association may be congratulated on thus having had one of the contested and most freely assailed privileges secured to licentiates by the Dentists' Act, approved and confirmed by the Royal Commission.

When the Blue Book is published we shall be able to give the statements of both these witnesses in detail. Meanwhile the existence of the opposition to the provisions of the Dentists' Act manifested by the above application of the Association of Surgeons practising Dentistry, should appeal to the common sense of those who think that the British Dental Association does nothing and has no positive reason for its existence, and show them that our recently acquired position and rights are not to be enjoyed or retained unless by organised effort on the part of the whole profession.

Perhaps if our claim for representation on the Medical Council had been backed by two thousand names instead of a meagre fourth of that number, the scruples of the Royal Commission might have been overcome in our favour. For this numerical weakness in our position the members of the British Dental Association are not to blame. The profession at large must bear the reproach as well as the consequences.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting of the Association.

THE Annual General Meeting of the Association will be held at the Medical Institute, Mount Pleasant, Liverpool, on Friday and Saturday, the 25th and 26th prox.

The following contributions towards the business of the meetings have been promised:—

An Address by Mr. C. S. TOMES, on "Some of the Scientific Problems of Dental Surgery."

Mr. W. BOWMAN MACLEOD, on "Mechanical Dentistry: its Prospects and Possibilities."

Mr. H. E. SEWILL, on "The Etiology and Pathology of Dental Diseases—What we know, and what we would like to know."

Mr. E. I. LADMORE will give a brief description of the structure and action of the Magnetic Mallet.

Mr. OAKLEY COLES will read a paper on "Dental Literature."

Demonstrations, which will be given at the Liverpool Dental Hospital, have been promised by

Mr. H. C. QUINBY, on "The Use of the Hand-Mirror in operations on the Upper Incisors."

Mr. G. CUNNINGHAM, on "The Application of Amalgams to Contour fillings."

Dr. WALKER and Mr. CHARLES CLAUDE ROGERS will demonstrate the Application of the Electric Mallet to Gold Stopping.

Mr. BRUNTON will demonstrate how to do Vulcanite Work without a flask. He will also endeavour to give a demonstration on Bonwill Crowns, and will exhibit some new adjustable Nerve Caps.

Mr. L. MATHESON and Dr. FINDLAY THOMPSON will also, if possible, give demonstrations in Gold Stopping.

Each Member, in addition to a ticket for himself, will be entitled to a complimentary ticket, admitting a friend to the Meetings and Demonstrations.

The Members' tickets, complimentary tickets, and programme, will be issued as soon as possible.

JAMES SMITH TURNER,
Hon. Sec. B.D.A.

Hotel Accommodation in Liverpool.

MEMBERS and their friends intending to be present at the General Meeting, are requested to send in their names at once to Dr. Waite, 10, Oxford Street, Liverpool, the Hon. Sec. to the Midland Branch, as that gentleman hopes to be able to secure favourable terms from hotel proprietors for Members of the Association and those holding Complimentary tickets. Should such a number of names be sent in as shall enable him to make the contemplated arrangements, the list of Hotels and Tariffs will be published in our August number.

Western Branch.

THE fourth Annual Meeting of this Branch will be held on Saturday, August 5th, at the General Hospital, Cheltenham, RICHARD ROGERS, Esq., L.D.S.I., President of the Branch, in the chair. The order of business will be as follows:—

11 a.m.: General Meeting; President's address.

2 p.m.: Adjournment for luncheon at Alma House, by invitation of the President.

3 p.m.: At the Afternoon Meeting papers will be read on—

"The Filling and Treatment of the Permanent Molars between the ages of six and fourteen years," by GASCOIGNE PALMER, L.D.S.Eng.

"The Retention of Artificial Dentures," by T. COOKE PARSON, M.R.C.S., L.D.S.Eng.

"Wasting of the Alveolar Process," by C. SPENCE BATE, F.R.S., L.D.S.Eng.

"On Celluloid," by W. A. HUNT, L.R.C.P., L.D.S.Eng.

"Galvanic Therapeutics with Anæsthesia," by W. V. MOORE, L.D.S.Eng.

Papers have also been promised by Messrs. H. P. FERNALD, D.D.S., L.D.S.I., and J. LAWES, L.D.S.I.

Mr. A. B. VERRIER, L.D.S.I., will exhibit his Continuous Gum Process.

Mr. J. H. GARTRELL will exhibit a new Celluloid Apparatus.

Messrs. BROWNE-MASON of Exeter, T. C. PARSON of Clifton, and several other gentlemen have promised to give clinical demonstrations of various modes of gold-filling and pivoting.

An exhibition of new and improved instruments will also be arranged for inspection.

Dinner will be provided at the Plough Hotel at 7 p.m. Members who intend to be present will please inform the Local Hon. Sec., Dr. Herbert Poate, 1, Royal Crescent, Cheltenham, at their earliest convenience.

The Council will meet at the Plough Hotel on Friday, August 4th, at 8 p.m.

Gentlemen desirous of joining the Branch should send in their names *before August 4th*, to

W. V. MOORE, L.D.S.Eng.,

15, *Princess Square,*
Plymouth.

Hon. Sec.

Scottish Branch.

THIS Branch was duly inaugurated at a meeting of Members of the Association residing in Scotland, which was held at the Edinburgh Dental Hospital, on the 13th ult., Dr. John Smith, F.R.C.S.Edin., in the chair.

Mr. W. B. MACLEOD read letters of apology for absence from Messrs. James R. Brownlie and J. Wells, and a telegram of similar purport from Mr. Wood, of Dumfries. He also intimated that he had received from eleven gentlemen belonging to the British Dental Association, the printed slips, filled in with due form, which, with the gentlemen present, more than met the required number to constitute a Branch Association, *viz.*, twenty.

Dr. SMITH stated that the meeting had been called for the purpose of establishing in Scotland a Branch of the British Dental Association. It was considered that this would facilitate the transaction of such local business as came under the scope of that body, as well as afford a better opportunity for the consideration of the more general measures that might from time to time be brought forward. It was intended that the branch society should adopt the principles and promote the work of the British Dental Association, in the conservation of the rights and privileges of the profession, in the establishment of a Dental Benevolent Fund, and in furthering the progress of dentistry, by granting, out of any surplus fund the Branch might hold, donations and subscriptions towards educational purposes. The more strictly legislative functions were proposed to constitute the main objects of the Branch. It was not essential, and it would seem to be also unnecessary, to include in its work any literary or scientific department, since there already existed in Scotland two societies which had satisfactorily occupied the field in that capacity. The business of the meeting would therefore consist in moving resolutions to the effect that such a Branch was desirable in Scotland, that such a Branch be now constituted, and in order to avoid the inconvenience which might have been incurred by members from a distance, that the meeting resolve itself into a committee for carrying out the necessary arrangements. The minor business would consist in framing a set of bye-laws, and electing office-bearers.

Mr. W. BOWMAN MACLEOD moved—"That it is desirable that a Branch of the British Dental Association be established in Scotland." It afforded him great pleasure in moving this resolu-

tion. There was not the least doubt that the constitution of a branch of any association was a most important affair, and they might certainly congratulate themselves in assembling for such a purpose. The head, although the controlling centre of all action, was, without hands or other members of the body corporate, but an incomplete anatomy; so an association without branches, through which it may disseminate benefits, or gather support and strength, would be comparatively useless and inefficient. Besides the being of use to the head association, it was of vital importance to them locally that they should constitute a branch, if they would be more than a mere cipher in the body politic, and would hold that place in the deliberations of the head association which their weight and merits certainly deserved. And it was for those purposes that they were met together. That they might need, at no distant date, to take local action must have been observed from the questionable proceedings going on around them. They had also to notice that in a great many quarters there was a certain apathy in giving effect to the Dental Act, and it was to antagonise that apathy, and to whip up the members of the profession into a just appreciation of the beneficence of the Act, which would be the greater part of their duty. It would also be a part of the duty, as well as the privilege, of this Society to cultivate that social intercourse which should always exist in a profession. They would find from the bye-laws it was proposed not to make this a local society, but a national and itinerating one. The meetings would not be confined to Edinburgh or Glasgow; it would be the proud privilege of the Society to visit the various large centres in Scotland, and thus meet with the provincial brethren in their district, giving them heart to continue in the good work. By bringing these brethren into close contact with the great centres, such as Glasgow or Edinburgh, they would be frequently enabled to discover and acknowledge merit which would possibly have otherwise remained hidden; and thus they would have the pleasure of helping forward a meritorious brother to the place in the profession which his abilities and conduct deserved. He begged to move the resolution.

Mr. WATSON seconded the motion.

Dr. REID said that he quite agreed with a great deal of what Mr. Macleod had said, but he was not at all clear about the advisability of calling it a branch. They were an independent body; he spoke of the Scottish dental licentiates who were receiving their privileges from the College of Surgeons of Edinburgh. The British

Dental Association hailed from London, and was connected with those who had received their diplomas from the College of Surgeons of England. The question was whether they should not be an independent body, rather than a branch. Of course they would work with the English Association, and not only so, but adopt its laws, so far as they were reconcilable with their position. Instead of being "The Scottish Branch of the British Dental Association," it might be "The Scottish Dental Association," and they might leave the Irish to do as they chose.

Mr. WILSON pointed out that the British Dental Association was not an English association; it included both Scotland and Ireland, and they were all members of it. They were only forming themselves into a Branch, so as to bring local influence to bear upon the deliberations of the Executive more effectually than they could as individual members. He hardly saw how they could be anything more than a Branch.

Dr. REID: We are quite independent.

Mr. WILSON: We are met as members of the Association.

Dr. REID: We can belong to both.

Mr. WILSON added that it was important that the Association should be as compact a body as possible. If they split it up into different sections, they would lose, to a great extent, the influence they possessed.

Mr. CAMPBELL thought with Dr. Reid that it was quite possible that they might take an independent position, and designate themselves, not as being connected with the British Dental Association, but by a Scottish name. But the circular calling this meeting was issued only to members of the British Dental Association, and if they had any other object in view, they certainly ought to have sent circulars to every dentist in Scotland. He did not, however, think it would be wise to attempt to have an independent position. They would be much stronger by acting in harmony with the British Association, which, of course, as had been said, embraced Scotland as well as Ireland. He would certainly give his support to the resolution which had been proposed by Mr. Macleod, to form a Branch of the British Dental Association in Scotland. It was not unlikely that in the west and in the east of Scotland there might hereafter be branches, just as there were several branches in different parts of England. Dentists would very naturally desire to meet frequently without having

to travel a great distance. He heartily gave his support to the resolution.

Dr. REID, in answer to the chairman, said that as it was merely a question of title, he would prefer that his suggestion be taken as an amendment.

Mr. BIGGS said that he could not see the force of proposing any new association, or any new formation of that kind at all, because they had already so many institutions. To form a new society, entirely independent of the mother association, he thought would be highly improper.

The CHAIRMAN admitted that some other similar associations had no branch in Scotland, although the business of Scotland was submitted to them and taken under their charge to a very great extent, even in a more important sense than the British Dental Association would take the business of the dentists of Scotland. For instance, the Medical Council met in London, and had the superintendence and charge of all medical matters in Scotland. It would be a very great convenience if a branch Committee met occasionally in Scotland; but centralisation seemed to be the order of the day. They might thus have an opportunity of discussing such questions as whether or not it might be desirable for Dental Licentiates to have a representative on that Medical Council, now that dentistry was an important adjunct to the business of the Colleges of Surgeons in Scotland and in Ireland. The small attendance at the present meeting showed how little probability there would be of many of the members of the British Dental Association going up to London to discuss such a subject, whereas if they had a meeting nearer at hand, and more convenient for the members, there might be a chance of an important question of that kind being considered by a tolerable gathering. He thought that in that way certain benefits might be derived from a Branch of the British Dental Association being established, not only in Scotland, but also in Ireland. But it was for the meeting to consider whether or not it would be expedient to establish a Scottish Branch of the British Dental Association, or to found an association similar to it, and call it the Scottish Dental Association.

Mr. FINLAYSON pointed out that there was a representative journal, conducted at a very moderate expense to them, and if they wanted to be an efficient body, as a separate body, they must have some organ of that kind; but with the limited membership

they would be likely to have in such a separate association, he questioned if they could have any organ at all. Then again, who did they propose as the members of this association? Would they limit it to the members of the British Dental Association, or would they appeal to all the registered dentists in Scotland to become members?

Mr. MACLEOD said he would put to the consideration of Dr. Reid the difficulty of his proposition. To found a distinct association apart from that of the British Dental Association was a task, the magnitude of which he (Mr. Macleod) was afraid Dr. Reid was not aware. Before they could take up a position as a corporate body, similar to that of the British Dental Association they would require a charter of incorporation; and that was attended not only with a great deal of trouble, but with a vast amount of expense. They would also require to have a medium—a journal—through which to convey the intelligence and politics of the association. The expense of such a journal was more than could be afforded, even though every member of the dental profession in Scotland should become a member of the proposed Scottish Dental Association. If, on the other hand, they would limit it to the licentiates in dental surgery, he would say, most confidently, that the time for that was not yet ripe. There were from 120 to 130 legitimate members of the profession in Scotland, and of these not one-fourth possessed the license in dental surgery; for such a small body of men to set themselves at that moment to such a Herculean task, was a thing that would only make them a laughing stock. They, as prudent men, as men desiring the welfare of their profession, should certainly take that which lay within their grasp; that was to constitute themselves as a branch of the present association, an association which took it all its time, notwithstanding the large number of individuals whom it could take within its embrace, to get a thoroughly appreciative and supporting number of members. He would also call Dr. Reid's attention to this; that if he wished well to the British Dental Association, he would not stand in the way of the Scottish Branch. Mr. Macleod then referred to the British Medical Association, instituted 50 years ago. Its first meeting, not as a branch, but as a general body, was attended by only 50 members; at present its membership numbered nearly 10,000. For several years after its birth it struggled hard for existence, and it was not until it had instituted several branches that it began to

show signs of enduring vitality Ever since the institution of those Branches, the first of which occurred about the fourth year of its existence, it continued to increase, until it now occupied a position which was a credit to the medical profession. He thought the same could be said of the dental profession. They had their present Association, which had liberal objects in view, and it became them, as members of that body, to do everything they could, as prudent men, to strengthen it. As they got larger in membership, it would then be the proper time to consider whether it might not be the best thing for themselves and for the profession to institute a separate and distinct national society.

Dr. REID asked whether Mr. Macleod spoke from knowledge of the facts, when he said that the British Dental Association held a charter, and also that they could be included under it.

Mr. MACLEOD said the British Dental Association had a charter, and had also the power to include them under it.

Dr. REID said that made all the difference, because without a charter they could not enforce any of their laws. He begged to say that he had brought forward his amendment entirely out of regard to what he at first thought would be best for the interests of the profession, and not with any desire to run counter to what had been proposed. With Mr. Macleod's explanation, however, he was quite satisfied. The Chairman then put the motion to the meeting, and it was unanimously adopted.

Mr. CAMPBELL then moved. "That there being present a sufficient number of members of the British Dental Association to found a Branch, the same be herewith constituted,—subject to the approval of the Executive Board." He need say little in support of this resolution. Having read the circular containing the resolutions to be submitted, as well as the drafts of the bye-laws of the proposed Branch, he had no doubt all present were already prepared to vote in favour of the formation of a Branch of the British Dental Association. Some had expressed surprise that they had not sooner set about this good work. Well, it was better late than never. He did not think, however, that there had ever existed the same urgent necessity for the formation of a branch in Scotland as at present. In Scotland the Odonto-Chirurgical Society gave the opportunity to willing-hearted men to meet frequently, for scientific and friendly intercourse. The benefits derived from this and similar societies could not easily be over-estimated. There were, however, one or two good objects not

aimed at by those societies. Those were well expressed in the circular calling this meeting.

Mr. WILSON seconded the motion, which was cordially adopted.

Dr. REID moved, "That this meeting resolve itself into a committee, for the appointment of office-bearers, adoption of bye-laws, and other business."

The motion, after being seconded by Mr. BIGGS, was unanimously carried.

Mr. MACLEOD then read the draft of the bye-laws proposed for adoption.

With regard to clause (b) of the "Objects of the Association,"

Mr. CAMPBELL said he protested against this Society having anything to do with scientific matters. That would certainly break in upon the old and well-established Odonto-Chirurgical Society.

Mr. WILSON said it was distinctly understood that this Branch had nothing to do with scientific papers. What Mr. Macleod meant was that if this Branch met in Edinburgh or Glasgow, they might get one of the other societies to have a meeting at the same time, and that the members might be allowed to attend such a meeting.

Mr. MACLEOD said that it had only been suggested that they should communicate with the office-bearers of those two societies, with a view to their meeting on the same day in the same towns. Their objects were social, political, and ethical.

Mr. CAMPBELL said he did not think they had anything to do with the social aspects of the question. He proposed that those words should be kept out altogether.

Mr. MACLEOD suggested that if they went from town to town, they would be in a better position to promote social intercourse, and maintain the social position of members.

The CHAIRMAN said that the objects of the Branch were to render assistance as far as possible in carrying out the Dentists Act, and the general consideration of subjects affecting the interests of the profession. That embraced everything, and was without any specification at all. To specify in an exclusive manner its objects might entangle them in a way that was not at all desirable, and instead of enlarging their sphere, might limit them to the specifications laid down. With regard to the words "social, political, and ethical," he thought they might, with a little modification, be retained. The "social" applied to society meetings, the meetings of bodies. That was the social interest of the Society.

If the British Dental Association proposed to admit all and sundry as members of that Association, they (the Scottish Branch) could then interfere in their social right, and say that these members were not qualified to be admitted to this Society. "Political," he thought, limited the thing too much. "Political" was more the rights of dentists in a community. He thought "ethical" should be kept in; "ethical" applied to the moral status of the profession. If they found that a man committed an act of indiscretion, or felony, that came under the subject of ethical. And he thought, that with the change of the word "political" to legal, the other words might remain in the sense he had alluded to.

Dr. REID also suggested that they should drop the word political, because what they required was fiscal power, to protect their rights. Politics was another matter altogether. It was their rights, as fighting against infringement, that was the principal object they had to look to, and that from a legal point of view.

The rule was then amended, and unanimously adopted.

The constitution having been settled, the bye laws were read singly, and unanimously approved. The meeting then proceeded to the election of office-bearers, and members of Council.

Mr. MACLEOD said it was unnecessary for him to make any remarks in proposing Dr. Smith as the first President of the Scottish Branch of the British Dental Association.

Dr. SMITH said he had much pleasure in accepting that position.

Mr. WILSON proposed that Mr. Campbell, of Dundee, should be appointed Vice-president.

Mr. FINLAYSON seconded the motion, and it was carried unanimously.

Mr. MACLEOD said that the meeting would do well to consider whether the Treasurer should be resident in Edinburgh, or should be located in another district of the country. Of course, they must always remember that this was not an Edinburgh association, but an association of Scotland, and that as the membership belonged to the whole of Scotland, the office-bearers must be distributed over the country. His own opinion was that the Secretary should be along with the President, wherever he should be, so as to be close at hand when wanted.

Mr. WILSON proposed Mr. Brownlie, of Glasgow, as Treasurer, and Mr. BIGGS seconded the motion.

Mr. BIGGS said they all knew what an able Secretary Mr.

Macleod had been in everything he had done. He had worked hard, and deserved great credit for the means he had taken, at all times, to do his work in an efficient and praiseworthy manner. He proposed Mr. Macleod as Secretary of this Branch of the Association.

Mr. FINLAYSON seconded the motion. Mr. Macleod, he said, was "one among a thousand," and they could not have a better man.

After which the following gentlemen were elected members of the Council :—Dr. R. Reid, L.D.S.Eng., Edinburgh; Andrew Wilson, L.D.S.Edin., Edinburgh; Matthew Finlayson, L.D.S.Edin., Edinburgh; Austin Biggs, Glasgow; Alexander Smyth, Glasgow; John Wood, Dumfries, L.D.S.; Peter Crombie, L.D.S., Aberdeen; Leon J. Platt, L.D.S., Stirling.

The CHAIRMAN said that the only other matter before them was that the secretary should communicate to the Dental Association the proceedings of this meeting, with a view of securing their approval. He supposed that they would empower the secretary to do that at his own convenience.

Mr. MACLEOD asked whether the meeting would give a general power to the President and the Secretary, so that if they received at once the approval of the General Association, they could take such preliminary steps as they might deem best for the extension of the Branch.

This was agreed to, and after a hearty vote of thanks to the Chairman, the proceedings terminated.

Mr. Brownlie, on being communicated with, expressed his regret that pressure of other engagements would prevent his accepting the office of Treasurer, but added that he would do everything in his power as a private member to advance the interests of the Branch. Under these circumstances, the President and Secretary, in virtue of the powers entrusted to them at the close of the meeting, secured the services of Mr. J. Austin Biggs, of Glasgow, as Treasurer, in the place of Mr. Brownlie, and those of Mr. J. C. Whyte, of Glasgow, as member of the Council in room of Mr. Biggs.

The Branch at present numbers twenty-nine members, including the following :—Dr. Smith, Dr. Reid, Messrs. Walter Campbell, Andrew Wilson, Malcolm MacGregor, James Mackintosh, George

W. Watson, James Stuart Burnard, James Cooper, John T. Cunningham, Charles Matthew, Edwin A. Cormack, William Forrester, Matthew Finlayson, W. Bowman Macleod, James Lindsay, Alexander Cormack, James Rankine Brownlie, Alexander Smyth, Austin Biggs, John G. White, Charles S. Sinclair, John Walker, Peter Crombie, John Wells, John Wood, George Sime, Leon J. Platt.

ORIGINAL COMMUNICATIONS.

On the Relations of Pathological Concretions of the Tooth Pulp to Prosopalgia (Tic Douloureux).

Read before the Surgical Society of Budapest, on Jan. 13th, 1880.

By DR. JOSEF ARKÖVY, Lecturer in the University of Budapest.

THERE are cases in dental practice which, on account of their extremely rare occurrence in a simple uncomplicated form, require not only a thorough knowledge of pathology in order to enable one to form a diagnosis, but deserve also careful enquiry into the details of their history. There are probably, for instance, few dental practitioners who have happened to see or treat quite genuine cases of prosopalgia arising from teeth which were externally perfectly sound, and therefore I venture to publish such a case.

The subject of which this paper treats lacks in several points more careful observations, inasmuch as the diagnosis and differential diagnosis, as well as the pathological histology, have not yet been satisfactorily determined. Perhaps I may be fortunate enough in this paper to make some slight additions to our knowledge of the subject.

On September 9th, 1879, Professor Kétli sent a gentleman to me with the request that I would examine his teeth to see whether they were sound. The patient's history was as follows: He was 36 years of age, married, a farmer; of good physique, spare, but of healthy complexion. He had never suffered from any serious illness; his occupation necessitated his being much in the open air, regardless of the state of the weather. He had never suffered from toothache.

Patient complains of unbearably severe pain on the right side of the face, from the temple to the nasal septum. The pain comes

on in paroxysms, of which the patient has some warning a moment or two before ; these attacks occur in the day only, never during sleep.

Patient states that in March, 1864, he began to feel severe lancinating pain in the face, lasting from two to three days—probably in consequence of a bad cold ; this was relieved by the use of chloral hydrate. In the autumn of 1877 (November) the same pains returned, lasting for three weeks, and then intermitting for three weeks more, becoming decidedly more severe after the intermission. Since then he has always continued subject to the attacks. The use of chloral internally, and of ointment of veratria externally, had no beneficial effect. Changes of temperature from heat to cold, or *vice versa*, appeared to have equally little influence on either the intensity or the frequency of the paroxysms ; on the other hand, sometimes a draught of air, the shaking of a carriage, or a sudden movement seemed to bring on the pain.

In October, 1878, he again became subject to acute attacks of pain, but not so severe as to incapacitate him from attending to his business. This lasted till January ; then an intermission occurred, lasting till May, 1879, when most horrible pain in the face again supervened. Since then the patient has never been free from pain for one day ; even when he woke at night, movement would at once bring on a fit.

The pain was greatest in the morning after rising. Iodides and bromides, vapour baths, cold douche, were all tried without any result. Since that time the attacks have "come on like lightning, and cease just as suddenly." Before the fit came on the patient experienced momentary numbness in the lip and cheek-bone. Occasionally a day, or a half-day, might pass without pain. Curious to say, the fits did not come on whilst the patient was in a recumbent position, but on rising an attack would at once follow. In consequence of the numbness of the lip patient experienced some slight impediment in speech. Often his teeth would ache one after the other. A fit often came on if the right ala nasi or the lip were touched. During the last six weeks the character and the intensity of the pain have not varied ; and whilst the patient, since May, was still able to occasionally look after his business, he is now utterly incapable of work, and has received leave of absence in order to get cured.

Present state:—On watching the patient it is seen that at intervals, varying from two to five minutes, the right side of the mouth

is drawn up towards the ear by violent muscular contractions. The right nostril is much dilated. Patient presses his hand, or his handkerchief, to his face, and gnashes with his teeth, or at least clenches them together. His whole aspect suggests acute pain. Then he becomes easier, and in a moment feels well again. During one of these paroxysms he is silent, while before it and after it his speech shows some impediment, not amounting to a stammer. The right eye winks even during the intervals. The colour of the skin on this side of the face is redder than the other; the ala nasi and tip of the nose are bright red. The nose and right upper lip are very sensitive to the touch. Patient hesitates before blowing his nose, or eating a larger morsel than usual. The red part of the lip on the right side is perceptibly swollen, and the least pressure on this brings on a fit.

Pressure on the under part of cheek-bone (*nerv. zygom. malæ*), under the temples, on the articulation of the lower jaw, on the infra-orbital region (infra-orbital nerve), and even on the facial muscles and hard palate, has no effect.*

On the other hand, besides pressure on the ala nasi and upper lip, great sensitiveness is perceptible on pressing the palate over the extremity of the roots of the second upper bicuspid and first molar.

After examining the teeth three times I found all of them, without exception, perfectly sound, strong, and well-developed. According to the statement of the patient, it appeared to him as if the pain at the commencement of the attack started from the right upper lateral incisor, and ceased at the second upper molar of the same side. It radiated from the first-mentioned tooth to the nostril, and left an "after-feeling" in the depths behind the temples, these parts being the seat of a permanent, dull pain. On examination of the distal surface of the tender second molar, it appeared as if the sound could be passed into an aperture near the division of the roots, but without exciting any pain, and without any signs of caries being perceptible. Moreover, tapping, and pressure on the teeth in any direction caused no attack of pain. It is remarkable that the only phenomenon which pointed with any certainty to the teeth as the seat of the affection, was the fact that grating of their labial surfaces, continued for

* Prof. Schuh, on Facial Neuralgia, &c., (Vienna, 1858,) pp. 5—8.

three or four to ten seconds, did cause pain, but even this was not perfectly conclusive.

DIAGNOSIS :—No clear and positive cause could be observed to connect the *tic douloureux*, which was present in so aggravated a degree, with the teeth. If we compare the subjective symptoms with the results obtained by examination, we find that the continual dull pain behind the temples and the corresponding acute sensibility on the side of the fossa canina and the ala nasi, stand much more in harmony to each other, if we do not seek the original cause in the teeth. These symptoms, in fact, point much more to the region of the distribution of the infra-orbital nerve and the naso-palatine nerve (of Scarpa), and it would appear that the neuralgia was more likely to be due to these nerves than to any of the special dental nerves.

It must also be mentioned that, considering the fact that the patient experienced a continual dull, heavy pain behind the temples, the supposition of a possible intra-cranial tumour did not seem very far fetched. There were two other circumstances which were of especial value in arriving at a judgment. The acute sensibility to pressure at the before-mentioned part of the palate, and the quick radiation of pain during the attacks between the lateral incisor and the second molar. The question now was, which of these two groups of symptoms was most deserving of attention? The task was to determine which of these complex symptoms was merely due to radiation, and which was the direct product of the affection. One must perceive that there is a difference between the two groups; for, in the first case, we have either to do with a central lesion, or, if we suppose a peripheral lesion, we have to do with the territory of nerves which have no immediate connection with the teeth, but only the ordinary connection through the nervous centres, and the symptoms are, in that case, simply the consequence of radiation. For the second group, on the contrary, the converse of this applies, and we may assume that the symptoms of this group are radiational consequences of the earlier.

It was an impossibility to incline with certainty to the one or the other direction. The observer felt inclined to rely upon the indications afforded by the subjective impressions, and these pointed to some internal affection of the teeth. This impression was strengthened by some circumstances already mentioned; but especially by the knowledge that there are cases in which more or

less similar neuralgic symptoms have been traced to the teeth after long-continued treatment in other directions. Amongst the lesions which may give rise to such symptoms there are recognised:—acute pulpitis, exostoses of the roots,* internal odontomes, which, according to Hohl† and Uhlrich, may be either parietal or free; and, lastly, foreign bodies imbedded in the substance of the pulp, and the calcification of the pulp sometimes met with.

Without altogether dismissing the first explanation, the last-mentioned consideration prevailed; since even if an operation on the teeth should disprove the diagnosis, yet this must be considered as a less serious surgical interference than a neurotomy on the face. And, on the other hand, if the operation should prove to have been justified, it could be regarded as more than probable that the radiational nature of the earlier group of symptoms would be shown, and that, after the removal of the cause, these would cease.

I had then to choose between the five accepted causes. Acute pulpitis occasions sometimes symptoms of prosopalgia; these are, nevertheless, always to be referred to a tooth pulp exposed by caries—in this case, however, the teeth were intact. There is, it is true, a form of pulpitis occurring in outwardly-sound teeth, which, according to some authors, is due sometimes to internal caries, and sometime it occurs in conjunction with (or as a result of) “explosion of the teeth”‡; but the descriptions are so obscure, and the particulars so unreliable, that these cases cannot yet be unreservedly accepted.

Whilst writing this paper I received the January (1880) number of the German “Vierteljahrschrift für Zahnheilkunde,” in which Witzel, supported by the most recent researches of Boedeker and Abbott relating to the protoplasmic network found in dentine and enamel, together with the results of his own investigations and confirmatory cases, declares himself decidedly in favour of the existence of *caries interna*.

Exostosis of the root, or hypertrophy of the cement and den-

* J. A. Salter, “Dental Pathology and Surgery,” 1874, p. 171; and other authors.

† Dr. R. Hohl “De Novis Pulpæ Formationibus,” Deutsche Vierteljahrschrift, 1878, Vol. 2.

‡ “Zahn explosion”: Vierteljahrschrift für Zahnheilkunde, April 1868, p. 146.

tine, as also osteomatous degeneration of the alveolus, or of the entire alveolar process, were not to be thought of, since these could be diagnosed by careful examination; for the thickened root and the swelling at the affected part, or, at any rate, pressure on the masticating surface, would discover the presence of such conditions. Nothing else, therefore, remained but to conclude that there existed somewhere in one of the teeth an odontome, or some kind of calcification in the tooth pulp. As mentioned above, the probe met with a cavity on the distal aspect of the second molar between the roots, and although this cavity could not be distinguished with probability as carious and as exposing the pulp, yet, considering that at this spot the periosteum of the root was laid bare and exposed to the air and other external sources of irritation, and the removal of this evil could only be effected by the extraction of the tooth; and considering further that, except by the method of exclusion, a direct diagnosis could not be made, one was led to anticipate that the removal of this tooth, and the examination of its pulp, would lead to a certain cure.

Having, therefore, extracted the tooth, I found one of the roots badly developed and bowed—hence the apparent cavity met with by the sound; the pulp cavity was diminished to one-half of its normal size, and at the entrance to one of the root canals I found a hard bony cylindrical moveable body, about 2 mm. in length. The first circumstance pointed to chronic irritation of the pulp; for the thickening of the dentine at the expense of the pulp cavity corresponded to a supplementary secondary dentine formation. In this process, however, the odontoblast layer is involved just as the periosteal osteoblasts are in the formation of callus; and thus the pulp tissue becomes degenerated into bundles of connective tissue.

The second circumstance, viz., the hard concretion, might be either a free internal odontome or an instance of calcification. Before, therefore, I had taken in hand the microscopic examination, I believed that I could, from what had gone before, establish the diagnosis of calcification of the tooth pulp.

From this it might be with certainty inferred that similar calcifications were to be found also in the other teeth, and that so long as these were present the neuralgic symptoms would not cease. Such a disease of the pulp, as the recorded cases show, does not usually appear in one tooth alone, but in several.

As regards the choice of treatment there are, under these cir-

cumstances, only two methods available. Either the whole organ which is the seat of the disease, viz., the tooth itself, must be removed, or the neuralgia-exciting pulp must be extirpated. The former is a short way, but is barbarous, or at least does not coincide with modern surgical tendencies. The latter is complicated, difficult, protracted, wearisome, and painful, but still conservative surgical treatment, which preserves the tooth for its duties.

The patient and his medical adviser accepted the last-mentioned plan of operation. Since it could not be determined with certainty which tooth contained such a diseased pulp and which not, I decided that it was wiser to follow the course of the nerve branch of the superior maxillary nerve downwards, that is to say, from the position of the extracted second molar to the middle line, on the supposition that it was more probable that the evil was to be sought on the point lying nearest to the centre. And, on the other hand, I wished to avoid the possibility that, by working from the front backwards, I should begin the operation on sound teeth, and only eventually arrive at my goal.

On September 21st, the series of operations began on the first molar. The plan of operation was briefly as follows: I applied, with a Morison-White engine, a trephine 3-4 mm. in diameter, to the teeth on the masticating surface of the molars, and on the lingual surface of the incisors and canines, and drilled upwards into the pulp cavity, enlarged the aperture, and, when sufficiently accessible, extirpated the pulp with a barbed extractor. I then syringed out the cavity, and applied in the root canal some wool soaked in strong carbolic acid, and closed the opening with cotton wool dipped in solution of mastic. This I left for two or three days; at the end of this time, I made good the gap in the root canals, in the pulp cavity, and in the solid constituents of the tooth, by a systematic filling. In this way I operated upon the first upper molar, the second and first bicuspid, the canine, the lateral, and, lastly, the central incisor on the right side.

The extirpation of the pulps of these teeth, occupied me from September 21st to 25th inclusive, *i.e.*, five days; the filling of the teeth took eight more days, each day's sitting lasting from two to three hours. At the commencement I applied two leeches to the palate above the tender second bicuspid. As the roots of the first bicuspid were very thin and branched, the operation did not succeed, since the drill penetrated into the alveolar periosteum between the divided roots, and so the removal of the tooth was

eventually found to be necessary. With the remaining teeth the operation succeeded perfectly.

The extirpated pulps of these teeth were pale and atrophied, except in the case of the bicuspid, which showed but slight symptoms of disease, and the central incisor, which appeared almost perfectly healthy, and were found—on examination with the naked eye—to contain small round seed-like bodies, from $\frac{1}{4}$ mm. in diameter downwards, which were chiefly found buried in the substance of the pulp tissue (figs. 1 and 2). The pulp of the first molar contained at least twenty of these bodies, whilst that of the lateral incisors had hardly any. In the canine there were only three or four. On the other hand, instead of the round or seed-like bodies, there were to be found in the pulp of the lateral incisor a great number of hard bodies (figs. 3, 4, 5). Both these forms, however, occurred together, as we shall see in the description of the microscopic examination, in one and the same pulp.

On the day after the extirpation of the pulp of the lateral incisor, the patient informed me that he had had no more of his attacks. The pain in the face had ceased, and there only remained the dull pain behind the temples and some hyperæsthesia of the skin of the right nostril. As for the rest, he is thankful to find himself quite well again. The results of the operation thus fully justified the diagnosis, it having been followed by a cure which left nothing to be desired.

The disease we have to do with, I mean facial neuralgia, is sufficiently common in surgical practice. It is seldom, however, that attention is directed to the teeth as the ultimate cause of the pain. A considerable number of cases prove the truth of this assertion, and the author of this paper would most emphatically recommend that an examination of the teeth should always be undertaken before any other cause is sought for, and *that this should be undertaken by a dental specialist in every case of prosopalgia.*

It is certainly true that a diagnosis of the internal lesions of the teeth can only be made indirectly, and as appears from what has gone before, by way of exclusion and exploratory investigations. But even this means of diagnosis is of great value, when we consider the years of suffering on the part of the patient, and of wearisome, unsuccessful efforts on the part of the surgeon, which exhaust the patience of both parties alike.

The discovery that a pathological formation appearing in the

pulp stands in direct etiological relationship to prosopalgia, is by no means new. But, until recently, this fact has been overlooked; and if we look into the literature of the subject, we find a fair number of old recorded cases, but that, until within the last decade, they were more or less incompletely described, especially as regards the surgical treatment and the pathological changes found in the pulp tissue.

In order to be quite clear about the subject with which we have to do, I consider it necessary to enumerate the pathological new formations which may occur in the pulp or pulp cavity: these are (1) secondary dentine; (2) internal odontomes—(a) parietal, and (b) free; (3) osteo-odontomes: (4) osteoma, very rare; (5) vaso-dentine; and (6) calcification of the pulp. As is evident from the nomenclature, most of these new formations consist of dentine or of its allies, and the calcification of the tooth pulp is alone of a different character. In our case we have solely to do with this last.

In the year 1780, John Hunter* makes passing mention of secondary dentine as causing new formations in the pulp cavity, and this was also known to other authors at the beginning of this century. But of the connection of this new formation with prosopalgia, I find no mention until the second half of this century. Salter† (1855) is to be thanked for the first description of calcification of the pulp. Amongst the principal results of his investigations may be mentioned the following: that calcification takes place in the substance of the pulp, and not on the surface, thus distinguishing it from the formation of primary or secondary dentine; that calcification spreads from isolated points, which he calls calcification islands; that it consists of an impregnation of the normal tissue of the part with earthy salts; that in the completely calcified tooth pulp the activity of the nerve has ceased, and the tissue is no longer sensitive; and that the process, although pathological in its nature, is reparative in its results.

In the year 1860, F. H. Thompson (*Glasgow Medical Journal*) calls prosopalgia of dental origin "Pseudo-tic-douloureux." In 1861, Foster Flagg‡ attempted to establish the diagnosis of this

* "Natural History of the Teeth," by J. Hunter; German Trans., Leipsic, 1880.

† Path. Soc. Transactions, 1855.

‡ Quoted in Zahnarzt, Jahrg. XVI, Nr. 2, lap. 43.

disease of the pulp and to point out the proper treatment. He points out that throbbing in the tooth, hyper-sensibility of the enamel, and of the pulp when exposed by operation, are characteristic signs that this nodular calcification exists. He was probably the first to describe the existence of this disease in outwardly sound teeth, and to recommend the devitalization of the pulp as its proper treatment. In the same year Tofohr* published a paper which he had read the previous year before the *Centralverein der Deutscher Zahnärzte*, and in which he, taking as his basis the work of Newcourt (1853) on "The Relationship of Neuralgia to Toothache," calls the new formations found in the pulp cavity, wrongly, "exostoses," and recommends extraction of the tooth as the radical cure of the evil. Hulme† also thinks it possible that calcification of the tooth pulp may give rise to neuralgic pains in the head and face.

In 1862, Garretson‡ found, in the case of a tooth which, though apparently sound, had given rise to prosopalgia, that the pulp was filled with granulations of osteo-dentine. He called the disease "nodular calcification." In 1863, Foster Flagg again communicated three cases in which he treated the tic-douloureux partly by extraction and partly by internal remedies and the local application of sulphuric acid at the spot of the erosion. Under the same circumstances, Ellis§ recommends the internal administration of muriate of ammonia and extract of belladonna as being very successful. A new era commenced when Döbbelin|| discovered a remedy for the above-mentioned pain by drilling into the affected teeth, extirpating the pulp, treating the pulp cavity with caustics, &c., and finally filling the roots and crown with metal. Döbbelin, moreover, performed in some cases a resection of the nerve, just before its entrance into the root canal. He further gives a very full description of the affection, from which we only quote the fact that he calls the disease "ideopathic neuralgia." For the rest, his description is overloaded with the doctrines of humoral

* Dr. E. Tofohr, jun., "Prosopalgia and its Cure"; *Vierteljahrsschrift für Zahnheilkunde*, 1861.

† Calcification of the Tooth Pulp, *Dental Review*, 1861.

‡ Dr. J. E. Garretson, *Med. and Surg. Reporter*.

§ Pennsylvania Association of Dental Surgeons, March 10, 1863.

|| Dr. C. Döbbelin, "Neuralgia of the Teeth," *Vierteljahrsschrift für Zahnheilkunde*, 1868.

pathology. Since the appearance of this treatise, and as a consequence of the perfecting of the dental engine, drilling into the teeth has become the recognised mode of treating such cases, at all events in Germany. Notwithstanding, there are many yet to be found who give the preference to the shorter method of extraction. Thus Tomes himself ("System of Dental Surgery," 1873, p. 584) writes that this operation of Döbbelin "sounds very strange." And McQuillen,* in America, asserts, in 1869, that the pain originates from irritation of the tooth pulp on which alveolar periostitis supervenes; the cure of the disease consists in extraction.

In the following year, Judd† mentions, in a paper published in the *Missouri Dental Journal*, that he knows no remedy for this pain; he holds that chronic irritation of the pulp is the cause of the disease, but could find no sure grounds for the diagnosis.

Dentistry received in Wedl's‡ invaluable work, published in 1870, a detailed description of its pathological anatomy. Since, however, I shall be obliged to appeal to this again later on, I will then cite his investigations.

Amongst recent writers on this subject, may be mentioned McQuillen,§ Scheller,|| Oakley Coles,¶ Tanzer,** Blume,†† Schlenker,‡‡ Iszlai,§§ and Witzel.||||

Tanzer, it is true, speaks rather of internal odontomes, and finds it surprising that in one case, after the removal of the painful tooth, the neuralgic symptoms continued to radiate from the

* Dent. Cosmos, 1869.

† *Missouri Dental Journal*, 1869.

‡ Prof. Wedl, "Pathology of the Teeth," Leipsic, 1870.

§ Dent. Cosmos, vol. X., Nr. 10, 1872.

|| Beitr. z. Symptomatologie d. Pulpaerkrankungen. D. Viertjschrift f. Zhk. 1878. Heft I.

¶ Notes on Dental Pathology, Transactions of the Odontological Society, 1874.

** Odontome, Osteome u. Osteo-odontome. D. Viertjschr. f. Zhk. 1879. Heft. III.

†† Beitrag zur Pathologie der Dentinneubildungen in der Pulpa. D. Viertjschr. f. Zhk. 1874. Heft I.

‡‡ Dentinneubildungen in d. Zahnpulpa. D. Viertjschr. f. Zhk. 1875. Heft IV.

§§ Versuch einer Zusammenstellung d. Indicationen, welche zur Trepanation von gänzlich oder nahe zu fehlerlosen Zahnkronen berechtigen. D. Viertjsch. f. Zhk. 1877. Heft. IV.

|||| Die antisept. Behandlung der Pulpa-Krankheiten des Zahnes, Berlin, 1879.

neighbouring teeth ; his operation is extraction. Blume communicates the case of a lady, aged twenty-five, who had no rest from pain until after the removal of ten teeth. There were scarcely any signs of periostitis of the roots, and the pulp was not only not inflamed, but was paler than normal ; he found in the pulp little nodules of dentine. To these must be added three cases reported by S. J. Scheff, jun., in which similar formations of dentine caused propalgia (*Allg. Med. Ztg.*, 1876). These were treated by extraction. This author makes the following remarks in his most recent paper on the subject,* with reference to the idea that the formation of dentine and of calcareous deposits goes on simultaneously: "For my part, I consider the dentine formation to be the sole cause of pain, since calcareous deposits of various sizes are found frequently in the pulp without giving rise to any symptoms." Schlenker found, in some genuine cases of this class, bony and calcareous granules mixed with others composed of dentine ; he mentions the treatment by trephining, but himself prefers extraction of the tooth. He relies upon the following symptoms for the diagnosis: no signs of inflammation ; the tooth is not sensitive to touch, but is so to heat and cold ; the pulp cavity is closed ; the pain comes on in paroxysms, mostly at night, in the form of an agonizing pain shooting up into the brain. Another characteristic is the tendency to ankylosis of the tooth with the alveolus.

Iszlai does not concern himself with the pathological changes in the pulp, but describes, in a thoroughly competent manner, the indications for trephining of the teeth, so far as they have been recognised by modern dental surgery. He considers that this operation is especially indicated in cases where there is evidence of new formations in the pulp ; but the author directs his attention in his treatise to the consideration of teeth which have become black, owing to sphacelus of the pulp.

I might go on to cite other authors who have written on this subject, but my aim is not to compile a complete bibliography, and what has gone before has only been given in order to show how our knowledge of this disputed morbid condition and this rarely-executed operation has been developed.

(To be concluded.)

* Dr. Jul Scheff, jun., *Lehrbuch der Zahnheilkunde*, Vienna, 1880.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The General Medical Council.

THE thirty-third Session of the General Medical Council was opened on Tuesday, the 27th ult., by the President, Dr. Acland, with an address, which dealt almost exclusively with medical politics, the sole allusion to dental affairs being contained in one short paragraph—viz., that “The legal points arising out of the vexed question of who are *bonâ fide* dentists, and what names ought to have been, or ought to be removed from the Dentists’ Register, cannot be left unnoticed.”

Some preliminary business having been disposed of, the Registrar read the following report of the Dental Committee, consisting of Drs. Acland (Chairman), Pitman, Quain, Haldane and Aquilla Smith:—

“The Dental Committee have considered the case of Mr. Thomas John Molloy, a Registered Dentist, referred to them by the Executive Committee to ascertain the facts, and have taken evidence.

“The Committee find that Mr. Thomas John Molloy was registered on the 22nd day of November, 1878, as ‘in practice before July 22, 1878;’ and that in 1879 the said Thomas John Molloy was registered, with the additional qualification of ‘Licentiate in Dentistry of the Faculty of Physicians and Surgeons of Glasgow,’ by virtue of a Diploma then produced, and bearing date the 27th day of August, 1879.

“The Committee further find that in pursuance of the power vested in the Faculty of Physicians and Surgeons of Glasgow, the President and Council of the said Faculty have, at a meeting held the 5th day of June, 1882, removed the name of the said Thomas John Molloy from the list of Dental Licentiates of the said Faculty.

“The Dental Committee further find that in consequence of the said order the said Thomas John Molloy has ceased to be a Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

“The Dental Committee having considered the case of Mr. Valleck Cartwright Mallan, a Registered Dentist, referred to them by the Executive Committee to ascertain the facts and take evidence, find that Mr. Valleck Cartwright Mallan has been

carrying on the practice of a dentist in his own name at 173, Praed Street, and at 64, High Street, Notting Hill; at 94, Praed Street, as Charles Smith; and at 106, Edgware Road, as C. Valleck.

"Also, that the said Mr. V. C. Mallan attended before the Committee in person, admitted the above facts, and expressed his readiness to submit to any suggestion which the Council should make.

"With reference to the cases of John Thomas Lambert and Joseph Walker, referred back to them by the General Council, the Committee find that John Thomas Lambert and Joseph Walker have now answered the communications addressed to them, and that they are in the same position as regards qualification as the other persons who are on the *Dentists' Register*, and who answered in due time the letters sent them by the Council.

"The Dental Committee report these facts to the General Council.

"HENRY W. ACLAND,

"June 26, 1882."

"Chairman

The PRESIDENT then reminded the Council that in discussing cases involving penal measures, strangers would be requested to withdraw during their deliberation.

The SOLICITOR (Mr. Farrer), said the first case was that of Mr. Thomas John Molloy. It had been found that the Faculty of Physicians and Surgeons of Glasgow had erased his name from the list of Dental Licentiates of that faculty. That fact had been submitted to the Council, and it was presumed, in consequence of his having been removed from the Faculty of Physicians and Surgeons of Glasgow, that qualification would be struck out from the Register under the orders of the Council. He would remain on the Register, but that particular qualification, as it had already ceased to exist at Glasgow, would cease to appear on the Register.

Dr. PITMAN :—We had a similar case to this in the year 1880, when it was resolved "that, as by the Report of the Dental Committee it appears that Mr. ——— has ceased to be a licentiate in dentistry of the faculty of ———, his qualification as having been such licentiate be erased from the *Dentists' Register*, and that the Registrar be ordered to erase such qualification from the Register accordingly." I, therefore, move a resolution in the same terms in regard to the case now before the Council.

The motion was seconded, and carried unanimously.

The PRESIDENT :—The Council will understand that that resolution does not have the effect of erasing Mr. Molloy's name from the Register altogether, because he was in practice before July, 1878.

Sir WILLIAM GULL enquired whether the reasons of the Glasgow Faculty of Physicians and Surgeons for removing that gentleman's name could be given.

Dr. ORR, in answering the question on behalf of the Faculty of the College of Physicians and Surgeons of Glasgow, said he was happy to state that it was not on account of any moral guilt that this gentleman had been deprived of his qualification, but merely because he insisted upon advertising in the most open and bare-faced manner, in spite of numerous applications to him to desist from the practice. They had written asking him to desist, and he wrote back, saying he was almost sorry that he had ever accepted the qualification, for he could not get his living unless he was allowed to continue advertising. That was the simple reason for the step which had been taken. He should like to know whether Mr. Molloy's name could not be erased altogether from the Register—whether the conduct he had been guilty of was not sufficient to warrant his name being erased as a registered practitioner altogether.

Mr. FARRER said they would have to take evidence upon that point, before they could erase a practitioner's name altogether. All they were dealing with was the letter of the Secretary of the Faculty of Physicians and Surgeons of Glasgow, which stated that that body had removed his name. It might be a very proper subject of enquiry as to whether there were sufficient reasons for removing Mr. Molloy's name altogether from the Register, but at the present moment what was before them was the removal of that particular qualification. What subsequent steps they might take would be for them to decide upon. The 2nd sub-section of the 11th section of the Dentists' Act of 1878 ran as follows :—"The Dentists' Register shall contain the said lists, made out alphabetically, according to the surnames, and shall state the full names and addresses of the persons, with the description and date of the qualification in respect of which they are registered." Now, Mr. Molloy had ceased to hold the qualification, and their Register would be incorrect if they did not alter it in accordance with his present position.

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Mr. MACNAMARA said he did not think they could touch the man, inasmuch as he had been in practice previous to the passing of the Act, unless he had been guilty of felony, misdemeanour, or any infamous or disgraceful conduct in a professional respect, and they could scarcely class advertising under any of those heads.

Professor HUMPHRY said that the words of the Act merely required that the Register should state the description and date of the qualifications in respect of which the persons were registered, and whether they subsequently lost those qualifications or not, the Register would be correct in stating that they were registered with those qualifications.

The PRESIDENT reminded the Council that the resolution had already been carried for the erasure of the qualification from the Register, and that it did not raise the question of removing his name from the Register, as he was in practice at the time of the passing of the Act. If there were any motion for removing his name entirely from the Register, he would suggest that the same course be adopted as was followed in the case of Mr. Hammond, namely, that it be referred back to the Dental Committee, to enquire further into the facts of the case.

Dr. ORR said he was quite satisfied from the discussion, and from what he knew of the facts of the case, that there were not sufficient grounds to attempt to remove the name entirely from the Register.

Dr. QUAIN said the matter was really not so complicated as it might appear. Their duty was to keep the Register correct. It was stated in the Register that such and such a person was possessed of such and such qualifications, and they were officially informed that he did not now possess them, and it was therefore their duty to correct the Register accordingly.

The PRESIDENT said the conversation was not strictly regular, because it had been already decided that the Register should be corrected, as it was in the case of Mr. Hammond, by removing the qualification. A further question had been raised, whether that was all that was to be done. He understood that it was not now proposed to do anything else, unless the matter were brought before them again, in which case it would have to be referred to the Dental Committee, for a further report as to the facts of the case.

Mr. FARRER : The next case is that of Mr. Valleck Cartwright Mallan, who was also a dentist before the Dentists Act was passed. He has admitted that he carries on business at four different

places—at 173, Praed-street and 64, High-street, Notting-hill, in his own name ; at 94, Praed-street, as Charles Smith, the name of a late partner of his, as we are told ; and at 106, Edgware-road, under the name of C. Valleck, which is part of his own name. He submits to the Council his willingness to do anything that they may think right in the matter. The Dental Committee had Mr. Mallan before them, and I think the opinion of the Committee was that he was a straightforward man, who was telling the truth, and if he has committed, as I suppose he has, an act of unprofessional conduct, he appeared to be willing to atone for it, and it was not so very bad, inasmuch as this conduct had been initiated before the passing of the Act. I should say that he submitted to his own name being put up at once at all those places of business, and to conduct his business in future in his own name if you think fit.

The REGISTRAR, at the request of Dr. Pitman, then read the following letter from Mr. Mallan :—

173, Praed Street, Paddington,

June 6th, 1882.

Dentists' Act, 1878.

SIR,—A summons was issued on the 22nd May against CHARLES SMITH, of 94, Praed Street, by the Medical Alliance Association, for infringing Section 3 of the above Act. I enclose a copy of summons. The summons was heard before Mr. LUSHINGTON on the 31st May last. He adjourned it for four weeks, so that your COUNCIL might be communicated with, to see whether it was considered that I had been guilty of "infamous or disgraceful conduct in a professional respect," in carrying on business under another name, and so liable to have my name erased from the *Register*.

The facts are these :—I carry on my business at four different places : at 173, Praed Street, in my own name ; at 94, Praed Street as CHARLES SMITH ; at 106, Edgware Road, as C. VALLECK ; at 64, High Street, Notting Hill, in my own name. The business at 94, Praed Street, was commenced in April, 1876, the house being then No. 37, Praed Street, and the name of CHARLES SMITH was used, he being then my assistant, and taking the management and an interest in this particular shop. I registered myself under the *Dentists Act* as of 173, Praed Street, where I use my own name, and did not state any other addresses. I find it is not the custom in registering to give more than one address.

I have carried on my business without interruption up to the present time.

At 94, Praed Street, I have an assistant, Mr. EDWIN JAMES HAN-

COCK, at 106, Edgware Road, Mr. BERTRANDI DAVIES ; both of whom are duly registered practitioners, as you will find. At Notting Hill Gate I attend myself by appointment.

My cousin, Mr. LIONEL DAVIS, obtained leave from your COUNCIL on February 9th last to proceed against "CHARLES SMITH" and "C. VALLECK," under Section 3 of the Act, but he never instituted any proceedings. Mr. Davis is a trade rival of mine, both in Praed Street and in the Edgware Road, and he perfectly well knew that "CHARLES SMITH" and "C. VALLECK" were names I carry on business in, and I believe that his application was made for the sole purpose of damaging me in my businesses, and was not *bonâ fide*. The fact of the leave being given was published in the *Chemist and Druggist* and in the *British Journal of Dental Science*.

The British Dental Association was made aware of the fact of my carrying on the businesses in the two names, and no remark was made by them. I enclose a copy of a letter to them and their Secretary's reply.

The Medical Alliance Association I know nothing of, but I believe they are set in motion by Mr. DAVIS. I know that he was in Court on the hearing of the summons, and was in conversation with the prosecuting solicitor.

I have been in business as a Dentist for 13 years, as reference to Messrs. ASH'S book will show.

I have no desire to carry on my business in a way which your COUNCIL may consider unprofessional, and I write to say that I am quite prepared to accept any suggestion which your COUNCIL may wish to make.

I should like to be informed whether leave was given to the Association to prosecute. I refer you to my Solicitors' correspondence with you thereon.

I do not for one moment admit that I have been guilty of any unprofessional conduct, or that what has taken place is within the Act. No hint or suggestion before that made by the Magistrate was ever made either by the British Dental Society, or by any other person, that carrying on business in different names was unprofessional. I think it right to call the attention of the COUNCIL to the fact that carrying on the business of a Dentist by Dentists in other than their own names is of frequent occurrence in London.

Trusting you will bring this letter at once before your COUNCIL,

I am, Sir, yours obediently,

VALLECK CARTWRIGHT MALLAN.

W. J. C. MILLER, Esq.,

REGISTRAR of the

GENERAL MEDICAL COUNCIL.

The PRESIDENT : I think it only remains for me to ask whether the Council desire to hear any further facts in this case. If they do not it will be my duty to request strangers to withdraw while the Council deliberates upon the case. I may also state that Mr. Mallan is in attendance, should it be deemed desirable for him to appear before us.

Strangers having withdrawn, the Council deliberated for some time. On the re-admission of the public,

The PRESIDENT, having previously called in Mr. Mallan, said : The Council have paid great attention to the circumstances of your case. They have received a report from the Dental Committee, and that report sets forth that you have been carrying on practice in your own name at 173, Praed Street, and at 64, High Street, Notting Hill, at 94, Praed Street, as Charles Smith, and at 106, Edgware Road, as C. Valleck. They further state, "Mr. Mallan attended before the Committee in person, admitted the above facts, and expressed his readiness to submit to any suggestion which the Council should make." The Council have requested me to ask you if you will give me now an assurance that the practices in question shall be discontinued.

Mr. MALLAN : One practice since the legal proceedings were commenced has been discontinued, namely, the practice under the name of Valleck. I have offered to substitute the name of Valleck Mallan on a brass plate on the door, which is the name under which I am duly registered. At 94, Praed Street, where I have been in practice under the name of Smith, I have no objection, if it will be any satisfaction to the Council, to place my own name in conjunction with that of Smith. I will, however, in the course of time remove the name, Charles Smith, entirely from my establishment, and in its place I will put my own name. The name, Charles Smith, is of course valuable to me, on account of its having being up so long, and I have a good connection attached to it. It is more important to me, because a rival in business has recently started within a few doors of me, who trades under the same title as myself, namely, that of the Working Dentist. Therefore, out of fairness, I ask this small indulgence, that you will permit me to retain the name of Smith for a time, in conjunction with that of Mallan.

A MEMBER OF THE COUNCIL : Is Smith alive ?

Mr. MALLAN : In answer to that gentleman's observation, I have no objection to put on my door "late Smith." In fact I

will do anything which is right or fair, but, of course, after one has been trading under a name for some time it becomes very valuable. A rival practitioner, who is a cousin of mine, was the instigator of these proceedings, and it would be only a satisfaction to him to see me compelled to take down that name, so that patients might walk into his establishment instead of mine. In taking the name of Smith, the Council will be aware that I am not trading upon anybody's reputation. I have not taken the name of an eminent practitioner like Mr. Tomes. I have simply taken a common-place name, and a name I had some right to take, because there was a young man in my employ of that name. Therefore, in reality, I am practising under the name of the original founder of that business.

A MEMBER OF THE COUNCIL : Is Smith dead ?

Mr. MALLAN : I cannot answer that question.

The PRESIDENT : The allegation is that Mr. Mallan trades under these names, and the decision of Council is after he has expressed his readiness to submit to any suggestion by the Council, that the practice which has been complained of shall be discontinued. I understand the assurance Mr. Mallan has given is that he will add his own name to the existing names at once, and that he will discontinue the name of Smith and others after a certain time. Is that your assurance—that you will discontinue all the names but your own ?

Mr. MALLAN : I am only practising at present under one name other than my own, and that is at an establishment where I am carrying on the business of my predecessor. I am doing nothing more than plenty of other people do, whom I could mention.

The PRESIDENT : Do I understand that you will discontinue the use of any name not your own ?

Mr. MALLAN : I will give you my word that I will discontinue the use of any name, except my own name, after the lapse of a certain time. For a certain time I wish to continue to use the name of Smith.

The PRESIDENT : What time ?

Mr. MALLAN : I will put up immediately, "late Smith."

The PRESIDENT : And then afterwards ?

Mr. MALLAN : After that I will place my own name alone. It is very hard that I should have established a business, in 1876, and should be obliged to take the name, under which it was

established, from the public at once. I have a competent and registered assistant managing my business there, and I may mention that it is quite a distinct practice from my own.

The room was again cleared; on the re-admission of the public.

The PRESIDENT said: It may be convenient that it should be known that the General Medical Council having received Mr. Mallan's assurance that the practice complained of shall be discontinued, do not think it necessary to take further steps in this case, and I now move that the Registrar be directed to furnish a copy of the Council's resolution to that effect to Mr. Mallan.

The motion was put, and carried unanimously.

Wednesday, July 5th.

The Council resumed the consideration of dental business on Wednesday, the 5th inst., Dr. Acland, President, in the chair, when Dr. PITMAN moved "that the following communications with regard to Dental Registration be entered on the Minutes."

(a) Extract from the EXECUTIVE COMMITTEE'S *Dental Minutes* of July 28, 1881:—

"*Read:* The following Communication from the BRITISH DENTAL ASSOCIATION, together with the 'opinion' and 'explanatory Resolution' therein referred to:

"40, Leicester Square,

"July 16th, 1881.

"DEAR SIR,—I am requested by the Business Committee of the BRITISH DENTAL ASSOCIATION to forward to you the accompanying opinion, and to beg that you will place it before the MEDICAL COUNCIL, together with the enclosed explanatory Resolution.

"I am, dear Sir,

"Yours very truly,

"JAMES SMITH TURNER,

"Hon. Sec. B.D.A.

"*The REGISTRAR of the*

"GENERAL MEDICAL COUNCIL.

"*Resolved:*—That the COMMITTEE acknowledge the receipt of the foregoing Communication, and inform Mr. J. S. TURNER that, in the opinion of the COMMITTEE, the steps requisite to be taken to try the correctness of the course taken by the GENERAL COUNCIL, under the advice laid before it, rest with the DENTAL ASSOCIATION, and not, as suggested in the opinion now forwarded, by the removal of a name which, in the judgment of the COUNCIL, is registered in conformity with law."

(b) Extract from the EXECUTIVE COMMITTEE'S *Dental Minutes*, of November 11, 1881 :—

“*Read* :—The following Communication from the BRITISH DENTAL ASSOCIATION, in regard to the *Resolution* contained in foregoing extract (a) :—

“British Dental Association (Incorporated June, 1880),

“40, Leicester Square, W.C., *October 15*, 1881.

“SIR,—I am directed to acknowledge the receipt of your communication, dated August 3rd, 1881, and in reply thereto to state, for the information of the MEDICAL COUNCIL, that the Representative Board of the BRITISH DENTAL ASSOCIATION is advised that the question lately raised respecting the correction of the *Dentists' Register* cannot be settled by action taken under Section 35 of the *Dentists' Act*: furthermore, that inasmuch as the COUNCIL, in full session, on February 3rd, 1881, declared that sufficient evidence of error in registration had not been adduced to justify the erasure of the names under consideration, it be asked that the memorial, with the appended legal opinions—constituting strong additional evidence—addressed to the COUNCIL, and in part considered by the EXECUTIVE COMMITTEE on the 28th of July, be laid before the COUNCIL at its next session.

“On behalf of the Representative Board of the BRITISH DENTAL ASSOCIATION,

“I remain, yours obediently,

“JAMES SMITH TURNER,

“*Hon. Sec. B.D.A.*

“W. J. C. MILLER, Esq., B.A.,

“*Registrar of the General Medical Council.*”

“*Resolved* :—That the several documents and legal opinions in possession of the COUNCIL having reference to registration under the *Dentists' Act* be placed in the hands of Mr. FARRER, the Solicitor to the GENERAL COUNCIL, for the purpose of his further advising the COMMITTEE thereon.”

(c) Extract from the EXECUTIVE COMMITTEE'S *Dental Minutes* of January 6, 1882 :—

“A Communication was made by the SOLICITOR of the MEDICAL COUNCIL in regard to the foregoing clause (b) of the *Dental Minutes* of the EXECUTIVE COMMITTEE'S Meeting of November 11, 1881 (*Minutes*, Vol. XVIII., pp. 255-6).”

Dr. PITMAN added that as there were so many new members of the Council present, perhaps it would facilitate business if Dr. Quain, who was thoroughly familiar with the Dental Business, would make a brief statement before Mr. Farrer, the Solicitor, gave his opinion.

Dr. QUAIN, in seconding the motion said, "I shall have very great pleasure in giving a short historical outline of the proceedings of the Council with regard to this Dental Business. They have been immensely misunderstood, but in making this statement I do not wish to add any comments to incite discussion. I shall reserve what I have to say on that head for some future occasion. I beg leave to begin by saying that the first step which we took was to require the person seeking to be registered to send in the declaration which will be found in the schedule to the Act, accompanied by certain statements which we required to be made in reference to circumstances connected with the employment of persons who applied to be registered. We did not vary the words of the schedule, but we added to it, under the advice which came to us from the Dental Reform Association. That led to the formation of the Register which from time to time has been altered. It is unnecessary now to refer to those alterations, but it will suffice to say that when the Register was published we were favoured by communications from great numbers of persons. First we were favoured by a communication from Mr. Smith Turner, the Hon. Sec. of the British Dental Reform Association, which is to be found in the Minutes of the Executive Committee of the 16th June, 1880. He sends a list of a number of persons who have been registered in the Dentists' Register as, according to their own attested declaration, having been at the passing of the Dentists' Act "in the *bonâ fide* practice of dentistry with pharmacy," but whose names are not to be found in the Chemists' and Druggists' Register of 1878. Such persons, he says, were liable to have their names erased. Therefore we must look upon Mr. Turner, representing the British Dental Association, as the plaintiff in the case. Then in addition to that, this gentleman sends to those persons whom the Council had thought fit to register, the following letter:—"Sir, I am directed by the Representative Board of the British Dental Association, to call your attention to the circumstance that although you have been on your own declaration registered in the Dentists' Register as in the *bonâ fide* practice of dentistry in conjunction with pharmacy, your name is not on the Chemists' and Druggists' Register. Under these circumstances your registration in the Dentists' Register is, in the opinion of counsel, a clear violation of the provisions of the Dentists' Act. The Representative Board therefore suggest (mind this is from

an outsider), that you should in writing request the Registrar to remove your name from the Dentists' Register. Should you not see fit to follow this recommendation within fourteen days from the date of this letter, the Board will feel bound to bring the case before the General Medical Council, the possible result of which proceeding will be that your name will be erased from the Register and that you and the witness to your declaration are liable to be proceeded against under the appended section 35 of the Dentists' Act, which was prominently printed upon your declaration paper." Then comes a letter from the defendants, this is to say a letter from a registered dental practitioner to the Medical Council which is as follows:—"On the 24th May last I received a letter from the British Dental Association calling in question the correctness of the declaration made by me in compliance with the requirements of the Dentists' Act. The Act required those who desired to register themselves as dentists to state if their practice was alone or in conjunction with pharmacy, &c., and as it did not specify that this meant being registered as a chemist and druggist, and as I obtain my living in part by assisting in Messrs. Gilbert & Co.'s Homœopathic Pharmacy, with which business I have been connected for the past ten years, and being anxious to answer the questions fully and conscientiously, I thought it my duty to state that my dental practice was in connection with pharmacy, as stated. You may judge, sir, of my surprise at finding that my desire to be correct had thrown me open to a charge of fraud and untruthfulness." I need not read the whole of the letter but it was accompanied by this statement, "I hereby certify that I have known Mr. J. Calver (the writer of the letter) for the past three years as earning his living in the practise of dentistry, in conjunction with Messrs. Gilbert & Co.'s Homœopathic Pharmacy. Christopher Wolston, M.D., M.R.C.S." Then we received a letter from Mr. Smith Turner in which he enclosed a list of some 400 persons who according to his contention were liable to have their names erased from the Register.

We now arrive at the proceedings of the Dental Committee, and from the Minutes we find that on the 16th July, 1880, Mr. Ouvry attended in order to advise the Committee as to certain legal questions referred to the Committee by the General Council. Then the Dental Committee, consisting of five members, resolved "that the several letters and documents relating to entries in the Dentists' Register, referred to the Committee by

the General Council be placed in the hands of the solicitor of the Council for his opinion and report thereon." Then on the 3rd of February, 1881, the Dental Committee, having considered the "corrected list of persons" submitted to the General Council and by the General Council referred to the Dental Committee for enquiry, find the following facts, which I should not think of troubling the Council by reading; but having found those facts they were submitted to the Executive Committee, and having arranged them, the Executive Committee desired Mr. Ouvry to bring before the Council this large volume of facts, which were collected with the greatest care and conscientiousness by Mr. Ouvry, and which cost the sum of £600; and Mr. Ouvry was requested to attend the Council and advise the Council as to the steps it should take. With his usual carefulness Mr. Ouvry did not rely entirely on his own judgment, but took care to provide himself with the best opinions he could obtain, viz., those of the Solicitor-General and Mr. Vaughan Hawkins. It is a wonderful puzzle to me why these new opinions were taken, but, however, Mr. Ouvry being requested to advise the Council on the facts—this was the first time the facts were before the Council—he came provided with the highest opinions he could obtain, which opinions you will find were submitted to the Council at its last meeting. We were asked why we did not go back to the opinions of Mr. Justice Bowen and Mr. FitzGerald. In the first place Mr. Justice Bowen was on the bench and we could not go to him again, and with regard to the opinion that he had previously given, he had not an opportunity of advising on the facts. He advised on the various questions submitted connected with the formation of the Register, but never on the facts. Then as to our not taking Mr. FitzGerald's opinion, he appeared for the plaintiffs, as I call them,—the Dental Reform Association. We were the judges sitting on the bench, and we were asked to take the opinion of the plaintiffs' counsel. We placed the matter in the hands of our solicitor to take the highest opinion he could, and he brought it before us at the last meeting, and then the Council came to a decision to this effect:—"That the Report of the Dental Committee not having put the Council in possession of evidence to show that any of the Registered Dentists named in the "corrected list of persons" submitted by the Hon. Secretary of the British Dental Association, or of the Registered Dentists named in the letter of Dr. Jacob, were

not at the time of their registration *bonâ fide* engaged in the practice of Dentistry, the Council is, therefore, not prepared to order the removal of any such persons from the Dentists' Register." We acted on the deliberate judgment of the three counsel who acted as our assessors and advisers in the matter. These facts and the decision of the Council had scarcely been published when the Executive Committee received a very respectful and reasonable letter from the British Dental Association, dated 16th July, 1881:—"Dear Sir,—I am requested by the Business Committee of the British Dental Association to forward to you the accompanying opinion, and to beg that you will place it before the Medical Council, together with the enclosed explanatory Resolution." The opinion there referred to is the opinion of the deservedly high authority, the late Sir John Holker, together with Mr. R. S. Wright and Mr. Fitzgerald, but that is again the opinion of the plaintiffs' counsel. It is no breach of confidence to say that our President submitted that very judicious opinion to the Council. Then it was resolved by the Executive Committee, "That the Committee acknowledge the receipt of the foregoing communication, and inform Mr. Turner that in the opinion of the Committee the steps requisite to be taken to try the correctness of the course taken by the General Council under the advice laid before it, rest with the Dental Association, and not as suggested in the opinion now forwarded, by the removal of a name, which, in the judgment of the Council, is registered in conformity with law." That was the decision of the Executive Committee, but that not being deemed satisfactory, there came a further letter from the Dental Reform Association, asking that the question should be submitted to the Council. I have now brought the matter down, as simply as I can, to the present time, when the letter is laid before you. We have Mr. Farrer here, and he will tell you what steps he has taken to lay the matter before counsel at the request of the Executive Committee.

Mr. FARRER: As I understand, Dr. Quain requests me to take up the story from the point at which he left it, and to tell the Council generally what has been done in the matter from the date at which Dr. Quain left it. Dr. Quain mentioned the opinion of Sir John Holker, Mr. R. S. Wright and Mr. Fitzgerald, which was taken by the Dental Association, and which was sent to the General

Medical Council, that opinion having for its object to endeavour to persuade the Council to erase from the Register those persons who had been entered upon the Register as Dentists by reason of their having been engaged in the *bonâ fide* practice of dentistry, and who added, "with pharmacy," or such other qualification as is mentioned in the Act, this latter qualification, however, not being sanctioned by their entry upon the Pharmaceutical or Medical Registers. Upon that counsel have differed very much; Sir John Holker, Mr. Wright and Mr. FitzGerald have held that persons who were not entered on the Pharmaceutical or Medical Registers, but were entered as Dentists, coupled with the qualification of pharmacy or surgery, as the case may be, ought to be erased from the Register. That, you will observe, was contrary to the opinion which the Council itself had taken, namely, the opinion of Sir Farrer Herschell, the Solicitor-General, Mr. Vaughan Hawkins and Mr. Muir Mackenzie. There being, therefore, this difference of opinion between the lawyers, and the whole case being referred to me, I brought the whole of the facts together and placed them again before Sir F. Herschell, Mr. Vaughan Hawkins and Mr. Muir Mackenzie, with the view that they might reconsider their original opinions by the light, if light there was, thrown on the subject by the opinion of Sir John Holker, Mr. Wright and Mr. FitzGerald, and, if they thought fit, modify or alter their opinions in any way. We had a long consultation on the subject, and the result of it was the opinion which I hold in my hand, and which, with the permission of the Council, I will read. Inasmuch as this is the latest and, perhaps, the best considered of all the opinions that have been taken on the subject, and inasmuch as it is the opinion of counsel, taken on behalf of this Council, as their confidential advisers, it is probably the opinion which it would be wise to follow. After calling attention to the opinion of Sir John Holker, Mr. Wright and Mr. FitzGerald, of which copies were sent to the three gentlemen who advised on behalf of the Council, the question put was this:—"In this view the Executive Committee desire counsel to advise them:—Whether having regard to what has taken place as appearing upon the Minutes above referred to, and having regard to the facts brought before Sir John Holker and his associates, the Solicitor-General, Mr. Vaughan Hawkins and Mr. Muir Mackenzie see any reason for varying from the opinions

expressed by them in August and December, 1880." Then the opinion is :—"We have considered the facts set out in the Minutes of the Council, and also the facts brought before Sir John Holker, Mr. Wright and Mr. FitzGerald, as well as the opinion they have given on the construction of sub-section (c) of section 6 of the Dentists' Act, 1878. The practical question on which a difference of opinion appears to exist is whether the words 'either separately or in conjunction with' the practice of 'medicine, surgery or pharmacy' necessarily exclude from registration, under sub-section (c), persons who have been at the time of the passing of the Act *bonâ fide* engaged in the practice of dentistry, but who in addition thereto, regularly, and at the same place practised medicine, surgery or pharmacy without being on the Medical or Pharmaceutical Register (as the case may be), or carried on some other calling. We are of opinion that the words in question have not this effect. Any person who can show that he was *bonâ fide* engaged in the practice of Dentistry at the time of the passing of the Act is, in our opinion, entitled to be registered, whatever his other occupations may have been and wherever they may have been carried on. This appears to us to have been the intention of the Legislature when the provisions as there stated are examined. Prior to the passing of the Act it was perfectly lawful for a person to practise as a Dentist and so to style himself, although he followed some other calling also, and the person so practising could recover charges for his dental operations. Since the passing of the Act no person, unless on the Register, can either call himself a Dentist or recover his charges. We think that it was the intention of the Legislature, by section 6, sub-section (c), to preserve to all existing practitioners their vested rights, and we cannot conceive that it was intended in the case of persons who followed some other calling, but whose dental practice might nevertheless be greater than many whose only calling was that of dentistry, to render it unlawful for them any longer to call themselves Dentists, and to prevent their recovering their charges. The present difficulty appears in a great measure to have arisen from the entries of the words 'with pharmacy,' and the like on the Register. In our opinion these words should not at any time have been placed there. Each applicant for registration under sub-section (c), section 6, ought to have applied on the ground that at the time of the passing of the Act he was *bonâ fide*

engaged "in the practice of dentistry," without adding anything else (see schedule to the Act), and the only question for the consideration of the Council was whether he was so engaged. That fact once established to their satisfaction, we think the Council were bound to place his name on the Register. We would repeat the advice already given to the Council, that in all cases such words as 'with pharmacy' should be erased from the Register, so that the dental qualifications only of the persons registered should appear on it." That was their ultimate and well-considered opinion after having had the matter discussed, and having heard all that could be said on both sides. In point of fact the feeling of counsel was this. Here the Legislature intended to give to all who were in *bonâ fide* practice, the same rights that they had before the Act passed, and not to limit those rights in any way, but to regulate rather the entries upon the Dental Register for the future. If, therefore, any course of action were taken which would limit or reduce the numbers of those who actually and *bonâ fide* practised dentistry before the Act came into operation, that would be a result which was not intended by the Legislature and which, they think is not included in the words of the Act. They think that the construction to be put upon the Act should be such as to preserve to all the previous *bona fide* practitioners the rights which they had at the time when the Act passed. In point of fact during the discussion notice was taken of the fact, although I do not know that it has much to do with the subject from a legal point of view, that if the rights of existing practitioners had been intended to have been diminished, the Act would not have passed, because such an opposition would have been raised to it that it would never have received the approval of the Legislature. But the point to which the Council have now to direct their attention is what was the meaning of the Act. Upon that you have the well considered and re-considered advice of the Solicitor-General, who is beyond all question one of the best lawyers of the present day, and upon that advice I can only, as far as I appear here as adviser to the Council, recommend you to act. It will be impossible for you to act upon the opinions taken adversely to those of your own legal advisers. You will see immediately the position you will be in if you do. Supposing you were to prefer to act on the advice of Sir John Holker and his associates, it is more or less known that you have taken opinions on your own behalf, and of course

the action that you have taken in retaining names upon the Register is supposed to be in pursuance of the opinions you have taken. Now, if you were to remove a name from the Register, and the person whose name was so erased brought an action, the Council would be placed in a very awkward position if it came out, as it might very well do, in the course of the trial, that in erasing the man's name and thereby limiting the free action and privileges of persons who had practised dentistry before the passing of the Act, you were acting in the teeth of the advice that you had received from your own legal advisers. Under these circumstances I do not think the Council can or ought to take any other course than that of following the advice contained in the opinion which I have read.

Dr. PITMAN's motion was then put, and carried unanimously.

Dr. STORRAR, in moving "That the opinions of Mr. Bowen, Mr. FitzGerald, the Solicitor-General, and Sir John Holker, in regard to the registration of dentists under the Dentists Act (1878) be entered in the General Council's Minutes," said :—I have listened with a great deal of attention to what has fallen from Dr. Quain and Mr. Farrer, with a sincere desire that in the question which is now in dispute between the Dental Association and this Council, justice should be done. This is a matter which concerns every individual member of the Council, because the Council having taken upon itself the duties of administering the Dentists' Act—there being no direct representative of the dentists on this Council—it behoves us, therefore, to consider well the full weight of responsibility which is upon our shoulders, and not to lay ourselves open in any way to the charge of favouritism. If it is clear that the views which have been set forth by Mr. Farrer are sound, I should be one to cordially fall in with his views, however much I might personally regret them, and feel that the dentists had been very hardly treated. But what I desire, for myself and for the members of this Council, is, that we should have the opportunity of exercising our own judgment upon this matter. We have had the opinions of Sir Farrer Herschell, Mr. Vaughan Hawkins, and Mr. Muir Mackenzie, but where are the other opinions? First of all there was an opinion given by Mr. FitzGerald, who, as the original draftsman of the Bill on behalf of the dentists, ought to have known what the leading dentists wanted, and ought to have framed the Bill with a view to fulfilling their requirements. Next

there was the opinion of Mr. Bowen, afterwards Mr. Justice Bowen, now Lord Justice Bowen,—one of the most distinguished men of the time in his profession,—but it is a most remarkable fact that the name of Mr. Bowen never escaped the lips of Mr. Farrer on this subject. I want to know what the opinion of Lord Justice Bowen is. Let that appear, with the opinion of Mr. FitzGerald, as I am given to understand that the opinion of Mr. Justice Bowen corresponds with that of Mr. FitzGerald. Then the opinion of Sir F. Herschell is taken. I quite admit the talent of Sir F. Herschell; he is a great advocate. How far he is a sound lawyer I am not competent to judge. He is a personal friend of mine, and therefore do not let it be supposed for a moment that I am prejudiced against him. But Sir F. Herschell gives a very distinct opinion, opposed to the opinion of Mr. FitzGerald, and opposed to the opinion of Mr. Justice Bowen, and this opinion he has confirmed after the opinion of Sir John Holker was drawn to his attention. I do not know whether Mr. Justice Bowen's opinion was submitted to him or not. But there is this much to be said; Sir John Holker has lately disappeared from the scene, and bearing in mind the warm and evidently genuine encomiums which were passed upon him by his brethren on the bench, as one of the quietest and most modest, but still one of the most profound lawyers of his time, I want to have his opinion entered on the Minutes, and I wish it to be fairly considered by the members of the Council as men of common sense. There are four opinions. The opinion of Mr. FitzGerald, the opinion of Mr. Justice Bowen, and the opinion of Sir John Holker, are all on one side, and there is the opinion of Sir F. Herschell on the other side. Do let us see these opinions. Do not put blinkers upon us, and ask us simply to follow Mr. Farrer. I have the greatest respect for Mr. Farrer, as I had for the late Mr. Ouvry,—he was a gentleman for whom I entertained great personal regard, as well as a very high opinion of his abilities as a professional man—but at the same time, I feel that we are bound, according to our own judgments and consciences, to do justice to the dentists, and to enable us to arrive at a proper decision, I ask that the opinions of these four gentlemen may be placed upon the Minutes.

Mr. PYLE seconded the motion.

Mr. FARRER: The only reason I did not refer to Lord Justice Bowen's opinion was this, that it was an opinion taken on the 3rd March, 1879, before the Register was formed, and with a

view to the formation of the Register. It was not an opinion taken on the present question, which is quite a different one. I should say that the bearing of the opinion is in the same direction as that of Sir John Holker's. I did not refer to it just now because it was given antecedently to the present question arising, and does not touch the present question. The present question is whether, in accordance with the request of the Dental Association, you shall erase the names of these persons from the Register, leaving them to demand their restoration, and to prosecute you by *mandamus* for their removal. The question that was submitted to Mr. Justice Bowen was a totally different one, viz., how the Register should be formed; the question here is whether you shall erase names already on the Register, the Register having in the meantime been formed. In addition, I may mention this, that while it is quite true that there are the opinions of Sir J. Holker, Mr. FitzGerald, and Mr. Wright, in the same direction as that of Mr. Justice Bowen's, there are the opinions of Mr. Vaughan Hawkins and Mr. Muir Mackenzie, as well as that of Sir F. Herschell, on the other side—the three latter gentlemen being selected, not on behalf of those who are seeking to make you take action of which you disapprove, but on your own behalf, and with a view to your own independent action.

DR. STORRAR: In reply to what Mr. Farrer says, I admit that the opinions were taken at different times, but the object with which Mr. Justice Bowen was consulted was how the Register was to be formed, and the object with which the other gentlemen were consulted was whether the Register should be corrected. Does not common sense tell us that the object was precisely the same? What has been the object throughout but to form the Register—either by putting those upon the Register that ought to be on the Register, or of taking off the names of the men from the Register that have no business there. There may be a difference of time, and there may be a difference as to the particular questions, but there cannot be the shadow of difference with regard to the objects for which the opinions were obtained.

SIR WILLIAM GULL said with great respect to Dr. Storrar, that he might be a great lawyer, but surely it made all the difference in the world whether a man was in possession or whether he was out of possession. It might require a great deal of force to put a man in possession, but when he was in possession it would require a great deal more force to turn him out. He thought that Mr.

Farrer was right in the advice he had given, that the names of the persons in question should not be taken off the Register. How they could have got on might be another question. [Dr. STORRAR : Let us have the opinions.] They might have got on through the bad action of the Council, but that was a reason why the Council should take double care that they did not make a bad action worse by striking them off, unless they could properly do so.

MR. TURNER : Was not the opinion of Mr. Justice Bowen obtained by this Council, or by the Executive Committee of the Council?

Dr. QUAIN : Yes.

MR. TURNER : I recollect when this question came up last year I asked why had not the Council an opportunity of seeing Mr. Justice Bowen's opinion. I said, Why cannot it be produced ; is not it in the Archives of the Council ? The answer I got was that it was in Mr. Ouvry's offices, and I have always thought that it was a grievance that members of the Council might fairly put forward that they had not seen Mr. Justice Bowen's opinion. It was an opinion which was got for the guidance of the Council, and yet I have never seen it. It seems to me it is a very reasonable thing on the part of Dr. Storrar that he should ask that the opinion of Mr. Justice Bowen should be brought before us that we may see it. It is another matter, and one that there may be a great difficulty about, as to whether we should publish the opinion of Sir John Holker and his associates, because that is an opinion not obtained by ourselves, but by another body, whom Dr. Quain designates as "the plaintiffs in the case." I think it is a matter of very great importance that this Council should not only have all the facts before it, but should also have the various legal opinions that have been given. Dr. Storrar preferred a very reasonable request, I think, in asking that these different opinions should appear on our Minutes, and I shall certainly support it.

MR. MACNAMARA said that Mr. Farrer had stated that these opinions were obtained at different times, and that different questions were submitted to the different counsel, but he would ask this question. Had not every one of those different legal advisers the Dentists Act before him, and was not it on the construction of that Act that the opinions were taken ? He would suggest that Dr. Storrar's request be at once complied with, because if it were not, it would always leave the motive of the Council open to suspicion. There was no reason why the opinion which had been

taken by the Council should not be laid before it. The Council had paid for it and they were entitled to see it. Why it should not appear on the Minutes, passed his comprehension. As to the other opinions taken by "the plaintiffs in the case," they could furnish the Council, or the Chairman of the Business Committee, with copies if they thought fit, and the whole thing could be entered on the programme of business and come before the Council in that way. He would support Dr. Storrar's motion.

The PRESIDENT reminded the Council that the advice which had been given last year, and which was now repeated, was that these opinions of counsel were for the use of the Council. Those opinions could at any moment be put into the hands of the Council, which was a different thing to the publication of confidential opinions. It was a question for the Council to decide whether the opinions should be published. Mr. Farrer was prepared to read Mr. Justice Bowen's opinion if the Council thought fit.

The Rev. Dr. HAUGHTON: That is not enough.

Mr. FARRER: As the President has stated, the opinion was taken on behalf of the Council, and every member of the Council is entitled to examine it as much as he pleases. Every one of the opinions in fact belongs to the Council and to every member of the Council, but they are confidential documents, and if you will allow me to say so, as a matter of worldly wisdom, it is a very unwise thing to publish counsel's opinions. It may probably be in the knowledge of the Council that if any question of law arises in any government office, that government office takes the opinion of counsel, but it takes good care never under any circumstances to let their opponents see it. As a rule it is a very wise thing to keep these opinions of counsel to yourselves and therefore so far as regards the question of printing and publishing these questions, I think the Council, although of course they are entitled to see them to guide their own judgment, will do very wisely if they pause before they take any such action as that.

Rev. Dr. HAUGHTON: If Mr. Farrer is right might I ask him why the opinion of Sir Farrer Herschell, Mr. Vaughan Hawkins, Mr. Muir Mackenzie is printed and in my hands? What is to prevent me publishing a copy of them to the whole world to-morrow morning?

Mr. MARSHALL said he would like to have Mr. Farrer's opinion

as to whether, this opinion having been printed, he thought that it was a right document to put on the Minutes.

Mr. FARRER: If you ask me what I advise I should certainly say not. It is a matter entirely for yourselves, but I should say it is a very unwise thing to do.

Dr. QUAIN: I should like to say a few words upon the motion. One of the most prominent questions that has been discussed to-day has been, why Mr. Justice Bowen's opinion was not printed and published; but it was acted upon, and in fact it is this opinion joined with Mr. FitzGerald's, that has led us into all this trouble. If you talk about opinions, you may have as many as you like to get. I have been accused of having acted unfairly in this matter, but before I ventured to take any steps I spent five guineas in getting an opinion, and I got the opinion of Mr. Lumley Smith.

Dr. STORRAR:—Was this opinion got on behalf of the Council?

Dr. QUAIN: Was the opinion of the Dental Association got on behalf of the Council?

Rev. Dr. HAUGHTON: As a point of order I must object to every individual member of the Council coming here with his lawyer in his pocket.

Dr. QUAIN: You did not object to the Dental Association obtaining opinions. I have a right as a member of this Council to obtain an opinion and to submit it to the Council, just as much as the Dental Association, and this is the opinion I got. The case was prepared by Mr. Arnold White.

Dr. STORRAR: Will you be so good as to give us the whole case?

The PRESIDENT thought that Dr. Quain was not speaking upon the motion or the amendment.

Dr. QUAIN: Then as an amendment I will move that the opinion of Mr. Lumley Smith be added to the opinions mentioned in the motion. If those opinions are received, this opinion of Mr. Lumley Smith should be also received: it is as follows:—"I am of opinion that a person who combines the practice of dentistry with some other occupation should not thereby be disqualified for registration. I think that section 6, sub-section (c), must be read as if it were 'either separately *from* or in conjunction *with* the practice of medicine, surgery, or pharmacy.' The words of section 11 and of the schedule include all persons engaged in the practice of dentistry, and the intention of section 6, sub-section (c), was to make it clear that people might be registered as Dentists although

already registered under other Medical Acts ; 'separately,' must be taken as referring to the Medical practice mentioned in the context with it." You may get any amount of opinions, and if opinions were counted on one side and the other, here is another to add to them. I heard Dr. Storrar say that Mr. FitzGerald was well acquainted with what the leading Dentists wanted. I have no doubt what they wanted was not to do justice to another class of persons, namely the poor people who are earning livings by doing other things besides practising dentistry. If the leading Dentists had been properly advised they would have taken care to have adopted a course which was adopted by the veterinary surgeons, and have put themselves in one list and put these other people in another list. There are 400 or 500 people who have been registered as Dentists, but who follow other callings, among others that of barbers. But how long is it since surgeons were barbers? What harm is there if a man is a barber ; he may be an excellent Dentist. At one of our meetings I said that a man who pulled out 500 or 600 teeth in a year and could give us evidence of his fitness to be on the Register, ought properly to be registered even if he were a barber. There was a time when dentistry was little more than the extraction of teeth, and I will venture to say that Mr. Cartwright first gained his great reputation by the extraction of teeth. I have been told that I have spoken disrespectfully of Mr. Cartwright, who was the founder of professional dentistry in this country. I was charged with the abuse of him, but nothing was further from my mind. What I said was, that long ago the mere extraction of teeth was one of the first steps towards dentistry attaining its present position. Dentistry has since then acquired a high position, but there is no reason why these people who practise dentistry should be struck off the Register because they follow some other calling. Just hear what Sir John Holker says about it.

Dr. STORRAR : I think Dr. Quain is anticipating the whole of this question. He is proceeding to argue upon the opinion of counsel. What I want is to get the opinions.

Dr. QUAIN : I want to show the Council that we have no business to open up this question again, because there are a multiplicity of opinions. I want to show you that, in the opinion of Sir John Holker, our Register is perfectly correct. He says "In each case it will be for the Council to decide as a matter of fact whether the person's real business was Dentistry. They would not

be precluded from so finding merely by the circumstance that he occasionally" (like the Homœopathic man), "or incidentally, or at some other place, carried on some other business." That opinion is perfectly in accord with everything we have done.

Dr. STORRAR: Read the rest.

Dr. QUAIN: Very well. "But a person whose real business was that of a blacksmith, shoemaker, veterinary, or barber, would not be registerable." He declares that a person whose real business is Dentistry is registerable. I say that we have even in Sir John Holker's opinion, a strong confirmation of the course we have adopted. When we take the opinion of three eminent counsel to guide us, they are our assessors, and we have no right to drag in opinion after opinion to set their opinion aside. Dr. Storrar says that there is no representative of the Dentists on this Board; but that is a statement which opens the question of the propriety of this Act altogether. I assure you I see with the greatest pain that gentleman opposite (Mr. Tomes) hanging day after day on the skirts of the Council. He ought to be sitting here or at the head of a Board of Dentists. The Dentists have, from sheer want of proper guidance, made themselves a fragment instead of an independent body. They come and pay their money here, which we spend for them, and they have not a single voice in anything that we do affecting them. I am ashamed of it, and I regret it deeply; they ought never to have submitted to such an Act. If the Dentists Act had, like the Midwives Act, appointed a separate Board under the control of this Council, it would have saved this Council all the trouble they have had. The Dentists might have been in a position to manage their own affairs, and contribute to and use their own funds; for here are the two Bills which were before Parliament—one in the original form that the Duke of Richmond had drawn up, and the other in the form by which it was suggested to him and readily adopted by him, that this Council should form a Dental Board and carry out the principles of the Act. This difficulty has resulted from bringing in an Act which was full of difficulties, and now we are going to get deeper and deeper into the mire, by doing what our legal advisers have declared to be illegal. Dr. Storrar has alluded to what the Dentists wanted, and said we must do justice. I say the Council should do justice to the poor people, whom the leading Dentists would deprive of their mode of livelihood. I repeat how very necessary it is to do justice to these people who are not represented. There is a double responsibility

thrown upon us. These people are many of them highly respectable, and it is open to any of them to bring an action against Mr. Smith Turner as representing the Dental Association. He has accused them of putting themselves fraudulently on the Register, and frightened many of them into taking their names off. Any one of these people has a good cause of action, and their case would be supported by the opinion of the Solicitor-General and those gentlemen who say that the Council is justified in keeping them on the Register. I hope that the motion will be dropped, and that we shall not leave ourselves open to actions being brought against us.

Dr. A. SMITH said the question appeared to be a very complex one, and the Council should be very cautious in the course it adopted. He might remind the Council that the words "with pharmacy" were introduced into the first Register, and were subsequently struck out under advice, and if the Council now put these adverse opinions before the public it would revive the old disputes, and the Council would get into a great deal of trouble. He thought on the whole, after the history of the case the Council had had from Dr. Quain, supplemented as it was by the advice of Mr. Farrer, that the Council had better follow the advice of Mr. Farrer, and not publish the opinions. The Council should let the matter drop, and not run the risk of opening the door to a wide and probably long continued litigation on the subject.

Sir WILLIAM GULL said he should certainly vote against Dr. Storror's motion, on the ground that it was an unpractical proposition which would land the Council in great difficulties. If the Council had done anything wrong in the matter of dental registration it was done, and they were countenanced in their action by the best advice that could be obtained. To discuss the question further was not a proposition of a business character at all. If any wrong had been done, it could be brought forward in a court of law, and the learned counsel who advised the Council how to act would advise them how to defend their action. He would move as an amendment "that the opinions of counsel for the guidance of the Council on the question of registration should be considered confidential and not entered on the Minutes."

Dr. LYONS seconded the amendment.

Dr. HALDANE agreed with the advice given by Mr. Farrer, and thought that it would be most injudicious for the Council to publish the opinions in question. Mr. Farrer had said that they were

confidential documents and might be very injuriously used towards the Council on some future occasion, and therefore he (Dr. Haldane) decidedly objected to Dr. Storror's motion.

Mr. TURNER asked whether the amendment of Sir William Gull covered the opinion of Mr. Justice Bowen and the opinion which had been placed in the hands of the Council by Sir F. Herschell. Mr. Justice Bowen's opinion was given on a case submitted by the Council, and he was therefore the adviser of the Council. Sir J. Holker's opinion of course they had nothing to do with.

The PRESIDENT said that if the amendment were carried, it would hinder the publication of the confidential opinions obtained by the Council.

Dr. LYONS said if the Council were to get into the habit of putting on its Minutes all documents of this kind it would lead to a great extension of the Minutes, and an extension of a very improper character. In other bodies with which he was connected they did not put on their Minutes, except in very rare and exceptional cases, such documents as these opinions. They were carefully noted and preserved for use, if at any time they should be officially called for, but never published. It was very undesirable to put them upon Minutes, especially in cases where the Minutes were made public. He agreed with Mr. Farrer that it would be very undesirable for a body like the Medical Council to publish these opinions. It would open the door to all sorts of cavilling, and furnish the defendants with the means of attack. Plenty of people were ready to find holes in the armour of the Council, no matter how much it protected itself. However regrettable the action of the past might be, what had been done had been done and could not be recalled. The Council must accept and place on the Register all those persons who, in their view of the Act of Parliament, had a right as Dentists to be put on the Register, no matter what other occupation they followed. There was much to be said in favour of the view that Dr. Quain took, but that was beside the question; an act had been done and the Council could not recall it. Parliament might be asked to repeal the Dentists' Act, but there was not much prospect of its doing so in the present state of public business, and the less the Council said about the matter at the present stage the better.

Dr. STORRAR: In reply to what has been said, beginning with the amendment, I have merely to say that there may possibly have been some exceptions during the course of the years that have

transpired since the foundation of this Council, but as a rule all the opinions of counsel have been published. Mr. Farrer suggests the inexpediency of recording in our Minutes these opinions of counsel: Professor Haughton has answered that we have the opinion of Sir F. Herschell. Why should the opinion of Sir F. Herschell be recorded and not the opinion of Mr. Justice Bowen? I am asked why I attach so much importance to these other opinions of Mr. FitzGerald and the late Lord Justice Holker. I do so for this reason, that those opinions have been taken by a body of Dentists, incorporated and holding systematic meetings as the members of a corporation outside this body, and that they, looking to the honour of their own profession, which they are surely fairly entitled to do, judge that they have suffered great injury through the conduct of this Council, they therefore are endeavouring to re-call this Council to a sense of what is just. That is the reason why I ask that these opinions should be recorded. It is all very true as Dr. Quain says, that he or any other member of the Council may draw up a case and get opinions from counsel, but that is quite a different thing altogether to the Dentists' Association getting opinions from counsel. It is not for me to follow Dr. Quain in a criticism as to what the Dentists ought to have done and what they did not do. To recommend that they should have got an independent Act of their own and not an Act hung on to this Medical Council is not only impugning the Dentists but impugning this Council. [Dr. QUAIN: No, no.] I beg your pardon, the Dentists Bill was sent down to this Council and they made it a condition that the legislation for the Dentists should be incorporated with the Medical Act.

Dr. QUAIN: No, no. I rise to order. They have never said anything of the kind.

Dr. STORRAR: They have said something very like it.

Dr. QUAIN: No. I rise to order.

Dr. STORRAR: It was done.

Dr. QUAIN: I rise to order. This is the resolution of the Council:—"That with reference to the Lord President's Bill entitled the Medical Act, 1858, Amendment Bill, as ordered by the House of Commons to be printed, the Council desires to express its wish that the Bill entitled the Dental Practitioners Bill be brought into conformity with the Dental clauses of the Lord President's Bill," and that was not done.

Dr. STORRAR: We had this Bill sent down to us; we made cer-

tain alterations ; and it was sent back to the Duke of Richmond. The Government for reasons of their own, which reasons I do not know, did not adopt all our recommendations, but is that the fault of the Dentists may I ask.

Dr. QUAIN : Is it our fault ?

Dr. STORRAR : Well it is not our fault.

Dr. QUAIN : You said it was.

Dr. STORRAR : The Government did not choose to take our recommendations. But if we are to go back and assume omniscience as to what should have been done by what was done we shall occupy the time of the Council for no practical good, and I do not know where the discussions will cease. I will say this simply, while the Dentists Act exists it is our duty to administer it. It is our duty to be just, and it is our duty, and our best policy also, to prove to the Dentists Association and to the numerous body of respectable Dentists that are practising throughout the country that they have not received injustice at our hands. As the first step therefore towards that, I ask that the opinions that have been obtained by this Council, and the opinions too that have been got by the Dental Association, namely, the opinions which I have recited in my motion shall be recorded on the Minutes of the Council.

Mr. SIMON enquired what had been the practice of the Council with respect to printing opinions on the Minutes.

Dr. PYLE said a great many opinions had been printed on the Minutes.

The PRESIDENT said it was the fact that opinions had on previous occasions been entered on the Minutes. Pressure both public and private had been put upon the Council to alter the course which it had taken under the advice of its solicitor and counsel. Not a few private communications had been made to the President to urge him to adopt the course of expressing practically a contradictory opinion to that adopted by the Council, to which the reply had been that the Council had acted on the advice of its legal advisers to the best of its judgment and ability, and it was not for the Council to impugn the course of action it has taken. Those who thought the Council had been in the wrong should attack the Council. He did not see that anything had occurred to cause the Council, after the advice which it had received, to enter upon the Minutes those opinions unless it desired

to do so. He did not think what had occurred formerly could be any precedent for the present occasion.

Rev. Dr. HAUGHTON: It should be distinctly understood that we are reversing our former precedents.

The PRESIDENT: No, because there are cases also where opinions have not been printed.

Rev. Dr. HAUGHTON:—We are establishing a rule for the future, we are tying our hands, because this carries a general principle with it. The Council ought to understand what they are voting about.

The PRESIDENT: By this vote we are deciding what we do under the present circumstances. On future occasions the Council will consider what it will do under future circumstances.

The amendment, "That the opinions of counsel for the guidance of this Council with regard to the registration of Dentists' be considered confidential and be not entered in the Council's Minutes," was then put and carried by fifteen against six.

On the motion of Dr. Storrar the names of the members voting for and against were taken down as follows:—

For the amendment, fifteen.		Against the amendment, six.
Dr. Pitman.	Dr. A. Smith.	Dr. Pyle.
Mr. Marshall.	Mr. Collins.	Dr. Storrar.
Mr. Bradford.	Dr. Quain.	Mr. Turner.
Dr. Chambers.	Sir William Gull.	Mr. Macnamara.
Dr. Humphry.	Mr. Simon.	Rev. Dr. Haughton.
Dr. Haldane.	Mr. Teale.	Dr. Fergus.
Dr. Watson.	Dr. Lyons.	
Dr. Pettigrew.		

The President and Dr. Scott Orr did not vote.

The amendment was then put as a substantive motion and carried.

Mr. TURNER said that from what had taken place in connection with the foregoing discussion, it was quite evident that amongst counsel of the very highest position and authority there was a very important difference of opinion as to the exact meaning of certain clauses in the Dentists' Act. He thought it was extremely important that there should be a judicial decision obtained in a court of law, so that the Council might be guided in a definite way and might avoid in future anything like such a discussion as it had been engaged in during the last hour. A special reason why the Council should come to some conclusion upon this matter was because among the documents before them in the programme of business was a letter addressed to the Council by the Hon. Sec. of

the British Dental Association to this effect:—"I am requested by the Business Committee of the British Dental Association to forward to you the accompanying opinion and to beg that you will place it before the Medical Council, together with the enclosed explanatory resolution." The explanatory resolution is as follows:—"That in strict conformity with the practice uniformly followed of placing before the Medical Council, any facts or opinions bearing upon the administration of the Dentists' Act, of with the Association may have become possessed, the joint opinion of Sir John Holker, Mr. R. S. Wright, and Mr. G. A. R. FitzGerald, upon the meaning of Section 6 sub-section (c), be at once forwarded to the Medical Council; and the Association venture to hope the Council will cause to be placed on their Minutes the accompanying joint opinion, together with the high legal opinion of Mr. (now Mr. Justice) Bowen, read before the Council in July, 1880, with the opinion also then read of Mr. G. A. R. FitzGerald, and the Association earnestly hope that in the presence of a great preponderance of high legal opinion in favour of a correction of the Dentists' Register, the Council will restore to the Register the recently erased descriptive terms—'with medicine,' 'pharmacy,' &c., and at its convenience proceed to the correction of the Register, by the erasure of names registered in the midst of doubt, or take such other steps as may lead to the production of a Register legally correct." That is to say, the British Dental Association wishes this Council to erase names from the Register which the Council has placed on the Register. This letter of the Secretary of the British Dental Association, was submitted to the Executive Committee, who passed a resolution to the following effect:—"That the Committee acknowledge the receipt of the foregoing communication, and inform Mr. J. S. Turner that, in the opinion of the Committee, the steps requisite to be taken to try the correctness of the course taken by the General Council under the advice laid before it, rest with the Dental Association, and not as suggested in the opinion now forwarded, by the removal of a name, which, in the judgment of the Council, is registered in conformity with law." That is the opinion of the Executive Committee, but I think it is only a matter of courtesy to the British Dental Association that the Council itself should pronounce an opinion on this letter and resolution, and therefore I venture to propose the following motion:—"That the Council adopt the recommendation of the Executive Committee, that it rests with the British Dental

Association to take the steps, if any, which may be requisite to try the correctness of the course taken by the General Council."

Mr. SIMON seconded the motion.

Rev. Dr. HAUGHTON : Can this motion be taken to-day. It should be put on the agenda paper.

Mr. TURNER said, as an objection had been taken by Dr. Haughton to the appropriateness of the motion in connection with the matter before the Council, the motion was almost *verbatim* the same as the resolution of the Executive Committee, which had been read. The question was a very simple one. The British Dental Association wished the Council to take action. The Council did not wish to take action, but said to the British Dental Association, "Try a case, and then when the case has been tried and a judicial opinion has been given upon it, we can act upon the judicial opinion instead of acting merely on the advice of counsel furnished to us privately." He (Mr. Turner) submitted that was the proper way to settle this very involved question.

Dr. LYONS, on rising to a point of order, said he doubted whether it was within the power of the Council to suggest to another body that they should proceed to litigation. On being asked to do a certain thing, the business of the Council was to say whether they would do that particular thing or not, and if they decided not to do the particular thing they should communicate an answer to that effect. It might be very desirable that a judicial opinion should be obtained, and the obtaining it might arise out of an action taken by the Council, but that was entirely different to the Council committing itself in the face of the public by suggesting that another body should commence litigation. He asked the Council to consider seriously whether such a motion fell within its province at all.

Mr. TURNER : I recognise the objection to the motion in its original form. The question which is submitted to us by the British Dental Association, together with the explanatory resolution which they offer, requires, perhaps, a more direct answer than my original motion gives them, and, therefore, with the permission of the Council, I will modify the motion, so that it may be in the form of a direct answer to their question : "That the Council are not prepared to take steps as suggested by the Dental Association, to erase names from the Register, which have been placed there by the Council under legal advice." The meaning of that is perfectly clear. It still remains for the British Dental Association

to reconsider the question, and to make up their minds what they are to do. We simply say that we are not prepared to take the steps they suggest.

Mr. SIMON seconded the modified resolution.

Dr. STORRAR : I am not going to make a speech. My speech will consist in reading the concluding paragraph of the opinion of Sir John Holker : "We think that practically the only means of obtaining a judicial decision will be for the Council to expunge from the Register the name of some person, who according to the views which we entertain, was not entitled to be registered. The question can then be tried on a *mandamus* to restore the name. The Council will, no doubt, be prepared to give every facility for this purpose." The motion of Professor Turner is, that the Council shall refuse to give facilities to carry out this recommendation, and, therefore, this being the only way in which the question can be tried, it cannot be tried.

Sir WILLIAM GULL : Did Sir John Holker advise this Council in that way ?

Dr. STORRAR : This is his opinion, and I adopt it as part of my speech.

Rev. Dr. HAUGHTON : If I had been in communication with Dr. Storrar he could not have thought my thoughts more completely than he has done. I do not propose to press this as an amendment, but I think this is a curiosity in the shape of a suggested amendment that the Council would not like to miss hearing. "That in order to obtain a judicial decision on sub-section (c) of section 6 of the Dentists Act the Registrar should be directed to erase the name of M. or N. (following the marriage and baptismal form) from the Dental Registrar."

The PRESIDENT then put Professor Turner's motion, which was carried *nem. con.*, and the Council adjourned.

Saturday, July 8th.

Dr. HAUGHTON said that with reference to a motion, of which he had given notice, to the effect that "the procedure of the Council in regard to the Registration of Dentists has been at variance with the opinion of Mr. Justice Bowen," if he were about to press this resolution, which he was not, he would have to make some slight alteration, which Mr. Miller, the Registrar, had called his attention to, namely, "the procedure of the Council with regard to correcting the Register of Dentists," but it was a matter of little or

no consequence. Having seen the very careful opinion of Mr. Justice Bowen, and knowing the high esteem in which that gentleman stood amongst his professional brethren, he (Dr. Haughton) thought it a serious thing for the Executive Committee to depart from his explicit and distinct advice. Without going into detail, as he was not going to press the motion, he would say that Mr. Charles Bowen had advised somewhat to the effect that it was the duty of the Medical Council to administer the Dentists Act according to the law, even though in some cases it might work hardship. Those who framed the Act were responsible for its shortcomings, and any strained interpretation reduced to a matter of discretion what ought to be a fixed duty, viz., to apply and administer it as part of the public law. That as a general principle laid down by eminent lawyers could not be disputed. Mr. Bowen's advice was to admit to the Register all those who proved that they were practising dentistry separately from, and those who proved that they were practising dentistry in conjunction with, pharmacy, his definition of a person practising "pharmacy" being a person practising under the Pharmaceutical Act. On all these points he (Dr. Haughton) thought Mr. Bowen was right, and he thought it was desirable to draw the attention of the Council to the fact that their proceedings were at variance with the opinion of Mr. Bowen. The Council had got an opinion from one lawyer and then an opinion from another. The Dental Association had got opinions also and one set of opinions having been set off against the other, the result was that the Council was no nearer a settlement than before. Mr. Bowen never expressed an opinion as to the removal of these 400 or 500 names from the Register—his opinion was that they ought not to have gone on. The question as to removing the names was a very different question from that as to putting them on. He regretted that they had been put on, and thought they ought not to have been put on, but under the circumstances he should say no more about it. He thought the Council ought in future to get very clear and well defined advice, and to act upon it once and for all. There had been a moving backwards and forwards from one opinion to the other in this matter which had led to the present difficulties. The question would remain unsettled as long as there was no decision of a court of law upon it. A suggestion had been made to him by Dr. Pitman as to whether it would not be possible to suggest to the Executive Committee to make arrangements with the Dental Association to choose a typical case

and have a decision upon it. What influenced him in withdrawing this resolution was the fact that he had ascertained that the high class dentists were practically satisfied with what had been already done by the Council in allowing the dentists to register surgical titles. He remembered well fighting the battle with the late Dr. Andrew Wood as to whether, as a matter of courtesy to the high class dentists, they should not be allowed to put on the Register their surgical as well as their dental titles. That had been done, and he should support most cordially Sir Wm. Gull's proposal to-day that they should be allowed to put on the Register all their medical titles. If that were permitted it would give great satisfaction to the high class dental practitioners, and they would not then be so anxious to have these 400 or 500 names struck off the Register. He could not press the Council to follow Mr. Bowen's advice because that advice was opposed to the effect which Sir Wm. Gull's motion would have, and it would not be fair to press it too strongly. He would therefore, with the permission of the Council, withdraw the motion.

The Council then proceeded to discuss the paragraph in the Report of the Dental Committee, referring to the cases of John Thomas Lambert and Joseph Walker (see p. 320).

Dr. PITMAN moved "That the Report of the Dental Committee not having put the Council in possession of evidence to show that John Thomas Lambert and Joseph Walker were not *bonâ fide* engaged in the practice of dentistry, the Council is therefore not prepared to order the removal of their names from the Dentists' Register." With reference to these two persons the facts were these. They had been put upon the long list of four or five hundred which was submitted to the Council on August the 9th, 1880; the Council referred the matter to the Dental Committee in order that they might enquire into and ascertain the facts concerning the various cases. Measures were taken for that purpose, and a communication was addressed to the various persons by the Solicitor under the instruction of the Dental Committee. The facts were ascertained and submitted to the Council, and the Council moved in the matter with regard to the great majority, but the cases of these two persons, John Thomas Lambert and Joseph Walker, were on the 29th April, 1881, referred back to the Dental Committee for further enquiry. The Dental Committee had made further enquiries with the result that was stated in the report. It was not a question whether these persons should be

put upon the Register, but whether they should be removed from these Register. These two persons had been found to be in exactly the same condition as regards their claim to be registered as the large number of persons whose right to be there had been questioned.

Dr. A. SMITH having seconded the motion, it was put to the Council and carried unanimously.

The Council then entered upon the consideration of Professor Turner's letter respecting dental apprenticeship and the arrangement of the curriculum, and afterwards discussed several other questions of great importance to the dental profession, but the length of the report compels us to postpone its publication until next month.

Dental Hospital of London.

THE Annual Distribution of Prizes amongst the students attending the medical school attached to this Institution, took place at Willis's Rooms, St. James's, on the evening of the 6th inst., before a large attendance of spectators, of whom a considerable proportion were ladies. Mr. Edwin Saunders, F.R.C.S., occupied the chair.

The CHAIRMAN called upon the Dean, Mr. T. F. K. Underwood, to read his Report for the past year, which was as follows:—

"This year fortunately I need not commence my Report with any remarks of a depressing nature, as the state of things around us has forced me to do for some years past, and I am thankful to say I shall hope to show that in spite of a disturbed state of the atmosphere which makes men anxious, we have been enabled quietly to pursue the even tenour of our ways and to continue establishing and cementing the work which it is the special object of this London School of Dental Surgery to carry out. Many provincial hospitals are springing up all round us, we are glad to say, and yet we have as many students as we have room for, and their work is as satisfactory as we could wish, which I venture to submit is a very hopeful state of things.

"The number of entries last winter was extremely good—it has seldom been better—and this is an important matter, for without students the hospital could not be worked, and the poor, who are so largely dependent upon us for relief, and who are, therefore, chiefly concerned in our prosperity, would suffer. Again I am

able to report a Pass List of 100 per cent. at the last examination of the Royal College of Surgeons. Every one of our candidates passed, and passed *well*. With this encouraging and pleasant fact before us we should be ungrateful if we did not say how greatly this is due to the work of our medical tutor, Mr. Morton Smale ; he deserves our sincere thanks for these successful appearances at the College of Surgeons. The honour of the School was largely at stake the other day, though I was not at all nervous, for our late excellent House-Surgeon and Assistant House-Surgeon were among the candidates.

"It is a great pleasure to us this year to have our kind friend, the founder of the Scholarship which bears his name, in the chair ; and the Saunders Scholar for this year, Mr. S. C. Buckland, will have the honour of receiving it from the hands of our deeply valued and generous friend. I need not describe to you how Mr. Buckland came to gain this distinction, the blue ribbon of our School, for the Prize List will explain it all. Mr. Buckland, directly he came here, began to take prizes and certificates, and I don't know when he means to stop, but this I do know, that he deserves our heartiest congratulations on his well-earned success. Our demonstrators Messrs. Rogers and Ackery have increased our debt of gratitude to them, if that is possible, since last year. Upon them devolves the task of personally teaching and superintending the work of each student, and if any of you could spend a morning with us at Leicester Square, and could see the demand made upon their patience and their skill, you would appreciate the difficulty I find in suitably expressing the obligations we are under to these gentlemen.

"Our late able lecturer on metallurgy, Mr. Louis, has resigned, having accepted an appointment abroad, and we have been fortunate enough to secure the services of Professor Huntingdon, of King's College, London. He has no prize list to exhibit, simply because no lectures were given last winter, the course having been removed to the second winter Session. We have had two changes in the staff in the last year ; in the place of Mr. Fox, Mr. Truman, an old student of this hospital, was elected, and our friend of many years standing, Mr. Coleman, Chairman of the Medical Committee and Senior Surgeon, whose resignation we so deeply regret, but whom we hope to keep with us as a lecturer on Dental Surgery and Pathology for many years to come, has been succeeded by Mr. George Parkinson, who bears a deeply honoured

name among us, and one which has stood among the foremost in our ranks for very many years.

"It is right that I should take this opportunity of mentioning the valuable help the staff have received during the past year from our successive House- and Assistant House- Surgeons. These posts are filled by senior students, who are selected from among the best men of their year. Mr. Blackmore our late, and Mr. Hern, our present very able and efficient House-Surgeon, together with Mr. Harrison and Mr. Cornelius, our late and present Assistant House-Surgeons, deserve our very sincere and hearty thanks for the excellent manner in which they have been, and are, carrying out the duties of their offices, and I am particularly grateful to them for the way in which, whilst they retain their popularity, they assist me in maintaining the necessary discipline.

"Mr. Buchanan, of Glasgow, still continues his generous gift to us of an annual prize of five guineas ; the subject for this year you will see upon the prize list. Mr. Buchanan began to think it was time he came himself, and was most kindly intending to do so when, I deeply regret to say, illness obliged him to go abroad. The prize for Operative Dental Surgery is, this year, gained by Mr. Walter Harrison, our late Assistant House-Surgeon. The examination for this prize extends over three days, and embraces the treatment of irregularities, extractions under anæsthetics, and stoppings, and the prizeman must, therefore, prove himself to be the best man "all round" in Operative Dental Surgery. The student's prize for their own Society, this year, is gained by Mr. Hern, whom all who have been to our meetings for the last two or three years will recognise as a very brilliant man. He is by this time so thoroughly accustomed to coming up here and receiving prizes by the armful, that I do not suppose to-day's ordeal will in the least disturb his equanimity, in spite of his natural modesty.

"I find that with my utmost efforts to be terse, my Report this year considerably exceeds in length that of last, and, therefore, I must bring it rapidly to a close. It is a great thing in these days not to be obliged to confess to falling off, but it is very gratifying to be able to "report progress," and I trust our friends, who have shown practically their interest in our work, by coming here to-day will think that we can show a fair record of work done. Finally I beg to tender, on behalf of my colleagues and myself, our sincere thanks to those kind friends, especially the ladies, who

have, no doubt, forgone many of the tempting engagements of the season to be with us to-day."

Mr. SAUNDERS then presented the prizes to the successful students in the following order:—

Saunders Scholarship; Mr. S. C. Buckland.

Mr. Buchanan's Prize for Essay on "Necrosis"; Mr. J. O. Butcher.

Dr. WALKER's class of *Mechanical Dentistry*; 1st. Prize, Mr. J. M. Ackland; 2nd, Messrs. W. Harrison and J. O. Butcher (equal); Hon. Certificates, Messrs. S. C. Buckland, A. H. Tester and H. Baldwin.

Dental Surgery and Pathology (Mr. Coleman); 1st Prize, Mr. S. C. Buckland; 2nd, Mr. A. H. Tester; Hon. Certificates, Messrs. J. M. Ackland, J. O. Butcher, R. Edwards and H. Baldwin.

Dental Anatomy and Physiology (Mr. C. S. Tomes, F.R.S.); 1st Prize, Mr. S. C. Buckland; 2nd, Mr. J. O. Butcher; Hon. Certificates, Messrs. J. M. Ackland, H. Baldwin and J. Petherbridge.

Operative Dental Surgery: Prize, Mr. W. Harrison; Hon. Certificate, Mr. J. J. Andrew.

The Students' Society Prize was awarded to Mr. W. Hern for his paper on "Fractures of the Maxillæ and their Treatment."

Mr. SAUNDERS then proceeded to deliver the following address:—

LADIES AND GENTLEMEN,—Occasions such as that at which we have just had the pleasure of assisting, possess an interest, not only for those who are connected by ties of consanguinity or of friendship with the *alumni* who have achieved distinction, but for all who are conscious of broad, human sympathies, and aspirations after intellectual progress. It is not only that we experience a pleasurable emotion on seeing the wreath placed on the brow of the intellectual athlete—the emotion that legitimately waits on success—but we feel constrained to regard with complacency the results of the emulation called forth in the struggle for supremacy, in adding strength to the moral fibre, and in carrying still higher the standard of professional merit. The mental strain and conflict, the waste and repair of brain tissue in the strife, even if at length the goal should not be reached, will be found to yield a rich harvest, in bracing the mind, in awakening and stimulating the perceptive faculties, in strengthening the memory and the power of assimilating knowledge—many-sided and various, and

on that account most valuable to the specialist. For without sympathising with those who set their faces against special training, special institutions, and special practice (with a virulence proportioned to their want of information as to what is comprehended under the head of such special knowledge), and without admitting that the specialist is necessarily a man of one idea, or of limited intellectual range, there can be no doubt that it is desirable that he should be from time to time refreshed by excursions outside the sphere of his own speciality. The perpetual recurrence of a similar class of cases, with the routine treatment involved, affording few opportunities of novel or original observations, cannot but have a benumbing and enervating effect on the mind. And at no period of his subsequent career will it be so easy for the practitioner to throw himself quickly and entirely into other lines of thought. For with the lapse of time, the environment of daily habit, and the exigencies of practice, he will find it increasingly difficult to disengage himself from the deepening groove of his own speciality. Thus there is a real and personal benefit outside and beyond the tangible symbol of success, not to be enjoyed exclusively by the victor, but which is common, though possibly not in the same degree, to him who fails, and to him who wins the prize. To both alike come health and renewed mental vigour from the struggle and heat of the chase ; and so far from the time being lost, which was expended in an outwardly unsuccessful contest, it will be found that a measurable and substantial good has been gained. Thus, in this case, as in many other instances in human affairs, the law of compensation becomes manifest, and another illustration is afforded of the truth of the axiom that no good deed is lost, and that no honest work is finally and altogether barren of good result. This, I think it will be admitted, is a very real and solid ground of consolation for those who are not included in the roll of prize-winners, inasmuch as they hold in indefeasible possession the substance of solid acquisition, though they are unable to point to the outward and visible sign of success. To the holders of the much-coveted and well-earned prizes, we can only offer our hearty congratulations and good wishes, not to say, confident hopes, of a career in harmony with this brilliant promise. Nor can we fail to be struck with the hearty plaudits ungrudgingly given by competitors, who in a thoroughly English spirit thus unselfishly give vent to their generous enthusiasm. And now, in accordance with established precedent, it would be my duty to

exhort the prize-holders not to remain satisfied with the position to which they have attained, but, far from feeling content with what has been accomplished, to persevere and strive for further and greater achievements. And then I should turn to the uncrowned, and bid them not to be discouraged, but to resolve with stern determination to turn defeat into a glorious victory by renewed application and diligence. But, gentlemen, I forbear, and I fancy I hear you say, "All this we know and have heard before." Be it so, but I will make one reflection; it is this—that a knowledge of human nature and of mental idiosyncrasy, should make us hesitate to accept failure at an examination as an unerring proof of incapacity, or the converse as an unfailing guarantee of professional pre-eminence. A highly nervous temperament, a temporary obscuration of memory, a passing ailment or similar unfavourable physical condition, occurring at the critical time of the ordeal of examination, may prevent an otherwise well-prepared candidate from doing justice to himself, in bringing out the full measure of his attainments.

The department of surgical practice of which you have made choice, and to which you have resolved to devote your life-long energies, with a success and distinction sufficiently predicated by the proceedings which have just taken place in this room, is at once exacting and important. It is exacting from the time and fatigue demanded by the operations which it embraces, still further complicated and impeded in no inconsiderable proportion of cases by the sensitive condition of the structures to be operated upon; rendering the proceedings alike irksome both to operator and patient. Although here again the law of compensation comes to our aid, as in the great majority of cases where no such morbid sensibility is met with, the patient experiences a lively sense of gratitude for relief from suffering, and for the preservation of a valuable organ. Again it is exacting in the amount of patience and forbearance required in assuaging the unreasonable apprehensions or expectations, as to the time and manipulation necessary, on the part of some patients. From all which it will be seen that a courteous demeanour, a kind manner, inexhaustible patience and dextrous manipulation are indispensable to the highest success, more especially if the practice should lie amongst highly-born, delicately nurtured and sensitively organised natures. It is important no less on account of the almost universality of the class of ailments of which it takes cognizance, than of the amount of

suffering to which they give rise. It is a well-worn common-place that no physical ailment obtains less sympathy, and yet there is none more intolerable while it lasts, or which is, in its effects, more prostrating and intellectually more absolutely paralysing than odontalgia. As was once well observed by an illustrious lady, who is conspicuously in sympathy with suffering or bereavement among persons of all sorts and conditions: "Yours is the most useful of all branches of surgery, for while a certain proportion of mankind may require the services of the Oculist or of the Aurist, all, almost without exception, have need sooner or later of the Dentist."

In addition to the anatomical and surgical teaching which is a pre-requisite common to all branches of the healing art, a certain personal aptitude is necessary to the successful pursuit of dental surgery. And foremost among the indispensable requisites of the dental surgeon is the possession of a strong yet gentle hand. It is well-known that it has long been found convenient to recognise two great divisions of the healing art—medicine and surgery. The former takes charge of the more deeply seated structures, or organs, out of the range of vision, and whose condition is to be inferred chiefly by symptoms. The latter, under the appropriate name of Surgery, obviously a contraction of the old chirurgery, or hand-work, comprehends all those parts of the organism which can be reached and operated upon by the hand, or by the instruments which it calls to its aid. In all this class of cases the hand plays a very important part, but in none is it so largely and constantly employed as in the speciality with which we are concerned. It is obviously therefore of the first importance that the hand should be well formed, with fingers well endowed with nerve-power and sensibility, so as to respond to the will of the operator with quickness, with accuracy, and with delicacy of touch; so that the patient may experience a feeling of confidence that while there is an ample reserve of power, there will be no unnecessary violence. If it should seem to some, that this is a comparatively unimportant detail, and that I insist with undue emphasis on this matter of tenderness of manipulation, I would remind them that we are sometimes too apt to forget, in the ardour of doing the best for the case, that we are working on living sentient structure, and should therefore be extremely careful not to omit anything which may diminish the necessary discomfort. There are few indeed who would fail to appreciate the careful avoidance of unnecessary

pain ; and fewer still who would not be deterred from again seeking timely aid, by the recollection of a protracted operation, conducted in a brusque and unsympathising manner. And here we may not withhold our grateful tribute for that inestimable boon to humanity, anæsthesia, that "sweet oblivious antidote," which by harmlessly inducing temporary sleep of sufficient intensity to render the patient insensible to pain, robs ordinary operations of their sting and horror, and renders extraordinary, but sometimes vitally necessary surgical proceedings, possible, which were formerly almost prohibited on account of the shock to the system by which they were unavoidably accompanied. And it must never be forgotten that this priceless gift, this magical charm, by which what was hideous and revolting in the surgery of the past, or pre-anæsthetic period, has been transformed into the mild beneficence of an angel of mercy, had its origin in the speciality of dental surgery. The crucial experiment which first demonstrated to the world for all after time, the feasibility of inducing, at will, temporary insensibility to pain, was the removal of a tooth. An operation which, simple as it may appear, is probably attended with as much pain while it lasts as any of the higher operations of surgery. Indeed it may be questioned whether, in the case of persons of highly sensitive organisation the nervous system could survive the agony thus experienced, if prolonged, of this happily transient operation. It is impossible to overestimate the great gain to humanity in the conscious avoidance of pain on the part of the operator, as well as in the interest of the patient, or the magnitude of the addition to the sum of human happiness both to young and old which have resulted from this discovery.

It might well seem superfluous to urge anything by way of justification for the existence of a special hospital and school for Dental Surgery, since the absolute necessity of making it a special branch of practice has long been recognised both in, and out of the profession. To those, however, who know something of the politics of the medical profession, it will be no secret that a Representative Committee for promoting reform in hospital management and administration has been of late drifting, under the insistence of a reactionist minority of its members, into a wholesale repudiation and ignoring of the utility and value of special institutions of the kind. That the needless sub-division of medical and surgical practice is to be deprecated and discouraged, is agreed on all hands ; but that all specialities can be equally well taught at

the large general hospitals, or that the support given to special institutions is so much subtracted from their income, are propositions which will not readily be admitted by impartial observers. It is simply idle and misleading to assert that the general hospitals are equal to the satisfactory discharge of all the functions of special institutions. It would be a present danger and manifest injustice to the inmates, not to say impossibility, for the general hospitals to receive cases of small-pox, fever, and infectious diseases generally; nor can they afford to encumber their wards with consumptive or other chronic forms of disease. And in our own speciality it may be fearlessly asserted that the space and light required, no less than the time and close attention necessary for operations in the present advanced state of the art, make it impossible to provide satisfactory means of instruction at a department of a general hospital. That a certain amount of knowledge on the subject, of great value to the country general practitioner, or to those whose destination is India or the Colonies, may be and is, thus obtained, will not be disputed; but to contend that the student can become fitted to hold his own among the accomplished practitioners of the present time by such training, is simply a delusion and a snare. The attempt, then, to blot out special hospitals must be regarded as altogether a retrograde measure; neither politic nor feasible; as futile indeed as the endeavour to stem the rising tide of progress, and one in which an appreciative public will not be easily induced to concur.

And now, lest I should become tedious and should have subjected your forbearance to too great a strain, I will conclude what I have to say by one reflection, which is at the same time a matter of congratulation. It is that our department of practice has not been invaded by the energetic and, shall I say, the aggressive of the superior sex; at least not in this part of the world. And if I regard this as a matter of congratulation, it is from no apprehension of rivalry and in no hostile spirit, but rather from a high sense of appreciation of all that is tender and gentle and graceful in the character of woman, which we would not willingly see sullied by contact with what, in a certain sense, is inevitably cruel and violent. Her fair hands were designed for delicate offices, and not for the amputating knife, the scalpel or the forceps. Let her exuberant philanthropy find its legitimate and appropriate sphere in supplementing the surgeon's work by the scarcely less divine work of nursing. By her comforting presence, by her low tones

of encouragement and consolation, by her skilful and gentle smoothing of the pillow, by her intuitive perception of what is soothing and restful, by her woman's tact with which she knows how to gladden and brighten the sick-room with bits of colour, with flowers or sweet odours,—in all of which she is immensely man's superior,—in all these things she will be doing a far more useful work, than if she could be relied upon, by doing violence to her nature, to undertake all the operations of surgery. A knowledge of anatomy and physiology may, indeed, stand her in good stead, by enabling her to correct errors in diet, and the management of health; and to avoid some eccentricities, more or less injurious in their effects on her delicate organisation, in the prevailing fashion of draping the human figure; and such knowledge will have the advantage of imparting authority to remonstrance. She may even combine with this, some knowledge of therapeutics, and may do useful work, to a certain extent, in medical treatment; but for the operations of surgery, she is by nature denied both the physique and the nerve. There is, indeed, no lack of energy and capacity for work in the woman of the period; and the burning words of scathing reproach, of our greatest living poet, are no longer applicable. He may no more apostrophise her in such strain as this:—

“Lady Clara Vere de Vere,
If time be heavy on your hands,
Are there no beggars at your gate,
Nor any poor about your lands?
Oh, teach the orphan boy to read,
Or teach the orphan girl to sew,
Pray Heaven for a human heart,
And let the foolish yeoman go.”

The Lady Clara Vere de Vere of the present day has gained from Heaven a human heart, and in her new-born zeal, not only does all this, which she was formerly rebuked for neglecting, but she burns to make the homes of the poor, æsthetic, and charges herself with the task of elevating their tastes in their amusements, and in all phases of their life.

This new zeal, this wide sympathy with the human brotherhood, this throwing down of caste and pride of ancestry, may seem inordinate and ill-regulated, but it shows, at least, a healthy and sound heart; and a recognition of the grand old truth which underlies our common nature, and which the same great bard has so well expressed in the ringing stanza:—

"Howe'er it be, it seems to me,
'Tis only noble to be good ;
Kind hearts are more than coronets,
And simple faith than Norman blood."

Mr. GREGSON proposed a vote of thanks to the Chairman for presiding. Mr. Saunders had been a great and liberal supporter of the hospital from the commencement, indeed it could scarcely have been established or carried on without his aid. He had also been a generous friend to the school, as was evidenced by the scholarship which he had endowed. His kindness in presiding that evening was therefore but a very small portion of the obligation which the friends of the hospital owed to Mr. Saunders.

Mr. SAUNDERS having briefly replied, the proceedings terminated.

ANNOTATIONS.

It is not often that we can quote with approval the opinions of the *Lancet* with reference to matters affecting the dental profession, and when such a consensus of opinion does take place, in the case of two authorities looking at the same subject from totally opposite points of view, this may surely be taken as strong confirmation of the correctness of the conclusions arrived at.

In an article on the recent session of the General Medical Council, the editor of the *Lancet*, after remarking on "the unprofitable and undignified appearance made by the Council in connection with the administration of the Dentists' Act," expresses himself as follows :—

"Its action in this matter has been very much disapproved by all who have watched it. The registration of anybody who could boast of ever having drawn a tooth, even a tooth that should not have been drawn, was felt at the time to be a scandal. The loose definition of the word 'dentist' brought about a rush to the Register, from which the dental profession will not recover for many years to come. All respectable members of the profession feel this acutely, and naturally enough, the British Dental Association urges the Council to erase names which have been entered on such slight grounds. But it is more easy to register than to de-register, and the Council escaped too easily from its difficulties, by moving, 'That the Council are not prepared to take steps, as

suggested by the Dental Association, to erase names which have been placed therein by the Council under legal advice.' This reference to legal advice is scarcely fair. For there seems no doubt that if the Council registered the thousands of names in the Dental Register under some legal advice, it did so contrary to a large body of legal opinion, including that of Sir John Holker and Mr. (now Mr. Justice) Bowen. Great efforts were made, which seemed to have a very exciting effect on Dr. Quain, to have these opinions elicited and published in the Minutes, but the Council, with more prudence than candour, ruled 'that the opinion of counsel be considered confidential.'"

IN the last number of this Journal we gave a report of a prosecution under the Dentists' Act, the further consideration of which was adjourned for a month, in order to allow time for the circumstances of the case to be brought under the notice of the Medical Council, and to obtain their opinion upon it. The hearing of the case was resumed at the Marylebone Police Court, on the 5th inst., before Mr. Mansfield, and the summons was then dismissed, on the technical plea, brought forward by the defendant's counsel, that the General Medical Council having specially authorised a Mr. Davis, of 140, Edgware Road, to prosecute, that gentleman had no right to delegate his authority to the Medical Alliance Association. As, however, the General Medical Council has expressed a very strong opinion as to the illegality of the proceedings complained of, and the defendant has promised to abide by their decision, the accidental failure of the police prosecution is a matter of no importance.

IT will be remembered that in the case referred to above, the defendant, a duly registered practitioner, besides carrying on business at two shops in his own name, was also the proprietor of two others, at which business was carried on in other names. On the previous day, Tuesday, July 4, the Council had condemned as illegal, in equally decided terms, another practice, which is, we believe, not altogether unknown in the dental profession, though the actual defendant in this case was a registered medical practitioner. This gentleman, besides the practice which he carried on at his own residence, was the proprietor of three or four branch practices, situated at various distances from his own house, at which the

great part of the work was carried on *in his name*, by unqualified assistants. The Council decided at once that this was unprofessional conduct of such a nature as to justify them in removing the name of the offender from the Register, and only desisted from so doing on receiving an assurance that the practice complained of should be at once discontinued. As the provisions of the Dentists' Act are in this respect precisely similar to those of the Medical Act, it is to be hoped that this decision will be duly noted, and acted on, by all whom it may concern.

THE *Dental Register* for March contains a very carefully written article, entitled "Anæsthetics Medico-legally considered," in which the numerous instances in which false accusations have been brought against dental practitioners, by female patients, on recovering from the influence of an anæsthetic, are discussed at some length. We trust that the danger here spoken of is now so fully recognised by dentists generally, that no one ever administers an anæsthetic to a female patient without securing the presence of at least one reliable witness. But should any of our readers ever have the misfortune to be threatened with such an accusation, he will find in this article what may prove to be valuable references to cases which have occurred, both in this country and in America, in some of which the accusation was persisted in by the patient, in spite of the fact that three or four witnesses—male and female—had been present throughout the whole time of the administration of the anæsthetic.

THE following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Dental Surgery of the Royal College of Surgeons of England at a meeting of the Board of Examiners held on the 21st ult, viz., Messrs. Alfred H. G. Barnard, of Putney, Alfred F. Baudry, of Brussels, Herbert G. Blackman, of Canonbury, Arthur L. Curle, of Hammersmith, Walter Harrison, of Brighton, Arthur A. Matthews, of Bradford, and Arthur H. Mountford, of Weymouth, all students of the Middlesex Hospital; and Messrs. Henry G. Read, of Finsbury Square, and Alfred Slate, Ockendon Road, N., students of St. Bartholomew's Hospital. The last named gentleman was already a Member of the College. One candidate was rejected.

APPOINTMENTS.

MR. FRANCIS JOHN VAN DER PANT, L.D.S.I., has been appointed Hon. Dental Surgeon to the Surbiton Cottage Hospital.

Mr. W. F. CORNELIUS has been appointed Assistant House-Surgeon to the Dental Hospital of London.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

The Benevolent Fund.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The suggestion of Mr. Crapper, that a Dental Benevolent Fund be formed, is one that should be carried out.

In the provinces we receive occasional calls from persons representing themselves to be dentists—or their relatives, in distress. I have temporarily relieved several. One whose tale I took the trouble to verify proved an impostor—and another, a very accomplished actress of the rôle of wife of a ruined Dentist gone mad, I was so fortunate as to escape relieving. These impositions are apt to steel the heart, and thus a really deserving case may suffer. We therefore must have rules and regulations as for "poor and distressed masons."

One of the physicians at the Leeds dinner told me they had such a fund for Yorkshire for medical men.

I would suggest a few ideas for discussion—

1st.—To be, or have been, a member of the British Dental Association, implies, or rather necessitates the *bonâ fide* and respectable practising of Dentistry—more so I fear than registration. I would, therefore, demand that every person seeking to benefit from this fund be, or have been, a regular subscribing member of the Association, or be the wife, or orphan of such an one.

2nd.—That he shall have regularly subscribed to the Benevolent Fund for two years at least.

3rd.—That he shall satisfy a Committee by local testimony (not necessarily professional) that his distress arises from no disgraceful conduct or habits of his own.

On these lines there might be scales of relief for qualified dentists and assistants, and the advertiser and exhibitor of specimens might be excluded.

The name of the applicant need not go beyond a small committee of three, who after full enquiry shall dispense relief most effectively and least obtrusively.

The said committee to be elected by the general committee from among their number.

This relief need not be given in the shape of money alone.

It would be a great help to some poor widow to send a child to school—to obtain votes into some masonic or other charity—to pay a doctor's bill, or to assist in a thousand ways that charity, brotherly love and *esprit de corps* would suggest.

The British Dental Association with its provincial branches, bringing together as it does men practising honestly the same profession, should be the head, fountain and lever of this scheme, but if its secretary and committees are already too over-burdened to undertake additional duty, there could be no objection to any of its members associating to carry out so excellent a project. In conclusion I would suggest to Mr. Crapper the desirability of collecting a number of rules of different clubs and benefit societies, so as to form this fund on a sound and tried basis, of which he should send you a digest for publication; we might then be prepared to fully discuss them at Liverpool in August, and elect our committee.

I am, Sir, yours truly,

HENRY BLANDY.

ANSWERS TO CORRESPONDENTS.

J. T. M. & *Antiseptic*.—Resorcin can be obtained from any first-class druggist. It is a white powder. The price would be about 2s. 6d. per ounce.

Other Correspondents and Contributors are requested to note the crowded state of our pages consequent on the publication of the long and important debates of the General Medical Council.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

In order to avoid trouble and additional expense, Members of the Association residing abroad are particularly requested to send in their Subscriptions without waiting for a formal application to be made to them by the Treasurer.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
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The Medical Council—Apprenticeship and
Additional Qualifications.

THE Medical Council on the last day of their past Session passed the following resolutions :—" That one year's *bonâ fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study," and " That the three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student either before or after his registration as a student : but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration." Thus is provided the greatest liberty of action which could be given without detriment to the interests of the student. No better method has been devised for imparting, or for acquiring, a practical knowledge of mechanical dentistry than by apprenticeship. But the arrangement is a private one, over which no efficient control can be exercised. Either the teacher, or the pupil, or both, may be unfitted for the work they have entered

upon. On the other hand, the duties of each may be successfully discharged. But it can be made necessary that the four years devoted to professional studies shall be left free for their sole and unhampered pursuit; and this has been done by requiring that persons shall have passed the prescribed examination in arts as an invariable precedent to student registration, which officially records both the commencement of the four years and the testimony that the student's education has been sufficient to enable him to enter upon professional studies advantageously.*

The discussion upon the apprenticeship question was altogether explanatory. Far different was that which followed. Memories were sadly at fault; incorrect statements were allowed to pass unchallenged; inconsistency was advocated; and Dr. Quain did not fail to show his usual hostility to the progress of dental surgery as a branch of medicine. All this confusion of facts, opinions, and feelings was brought about by Sir William Gull's and Dr. Storrar's successful motion—viz., "That any or all of the qualifications in Schedule (A) of the *Medical Act* be registrable by registered dentists in the *Dentists' Register*." Objections were inconsistently raised on the ground that Lord Justice Bowen's opinion was adverse to such entries in the *Register*, and this contention was pressed notwithstanding that Lord Justice Bowen's opinion of a later date upon a much more important question, bearing as it does directly upon the correction of the *Register*, was wholly ignored. In fact, the question of higher qualifications was one that the Act enjoins the Council itself to decide, and one which could be decided only by persons practically acquainted with the details both of a medical and a dental education and their relations to each other. Whether a further study of

* These and other regulations for dental students may be had on application to the Registrar, Medical Council Office, 299, Oxford Street, London, W.

three-fifths of the subjects embraced in a dental education indicates a higher knowledge of those subjects than is required for the licentiatehip, certainly is not a question for a lawyer to decide. But the Medical Council has from the first shown a remarkable preference for walking on crutches. That Dr. Quain, who avowed his preference for ignorance in dental practitioners, should object to the entry of medical qualifications in the *Dentists' Register* was natural and quite consistent with his hostility to the dental profession ; but a just cause for complaint lies in his oft-reiterated statement that (notwithstanding the Government draughtsman's published declaration to the contrary, read by Dr. Storrar) the Dentists' Act was not made conformable with the dental section of the Lord President's Medical Bill. The powers of initiation originally contained in the Bill in respect to both medical and dental matters were in each case declined by the Council in recorded resolutions, and supervisory powers were therein substituted. The Government, by a long series of amendments, printed by order of the House of Commons, July 25th, 1878, took steps to adopt the amendments proposed by the Medical Council, and the amendments introduced by the Government in the Dentists Act, though not in accordance with Dr. Quain's wishes, are in full accordance with the resolutions passed by the Council. Quibbles may be raised on phraseology, but the foregoing facts are incontestable. The complaint of trouble given by the Dentists' Act comes with very ill grace from one who opposed from the first its letter and spirit, has yet thought fit to hold an administrative office under it. We cannot express any gratitude or allow any credit to Dr. Quain for withholding a futile vote against Sir William Gull's and Dr. Storrar's just and wise resolution.

We strongly urge upon those who are interested in the progress of dental surgery a careful reading of the report

that has formed the subject of the foregoing strictures, a copy of which will be found in a subsequent page; and we would further urge the immediate registration of the additional medical qualifications by those who possess them, in order that they may come into the next forthcoming Register.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting of the Association.

THE Annual General Meeting of the Association will be held at the Medical Institute, Mount Pleasant, Liverpool, on Friday and Saturday, the 25th and 26th inst.

The following papers have been promised:—

“On some of the Scientific Problems of Dental Surgery,” by Mr. C. S. TOMES.

“The Etiology and Pathology of Dental Diseases; What we Know, and What we should Like to Know,” by Mr. H. E. SEWILL.

On “Dental Literature,” by Mr. OAKLEY COLES.

On “Mechanical Dentistry; its Prospects and Possibilities,” by Mr. W. BOWMAN MACLEOD.

“The Dental Diploma; What it is, and What it is Not,” by Mr. S. J. HUTCHINSON.

“Report of Cases of Dead Teeth Treated by an Antiseptic Process,” by Mr. A. COLEMAN.

“The Structure and Action of the Magnetic Mallet,” by Mr. E. J. LADMORE.

Demonstrations will be given [at the Liverpool Dental Hospital on Gold Filling, the use of the Electric Mallet, &c., by Dr. Walker, Messrs. Claude Rogers, L. Matheson, and others. Demonstrations have also been promised by

Mr. H. C. QUINBY, on “The Use of the Hand Mirror in Operations on the Upper Incisors;” and by

Mr. G. CUNNINGHAM, on “The Application of Amalgams to Contour Fillings.”

Mr. G. BRUNTON will demonstrate “How to do Vulcanite Work without a Flask.” He will also endeavour to give a de-

monstration on the application of Bonwill Crowns, and will exhibit some new adjustable Nerve Caps.

Each member, in addition to a ticket for himself, will be entitled to a complimentary ticket admitting a friend to the meetings and demonstrations. These, with a carefully-arranged programme, will shortly be issued.

The members will dine together on the evening of Friday the 25th, at 7 p.m., at the Adelphi Hotel. Tickets (price 7s. 6d. each, exclusive of wine), may be obtained from the Hon. Sec. to the Reception Committee, Dr. Waite, 10, Oxford Street, Liverpool, with whom members who intend to be present are requested to communicate as soon as possible.

Hotel Accommodation at Liverpool.

DR. WAITE is happy to be able to state that the proprietor of the Compton Hotel, Church Street, Liverpool, has agreed to receive members of the Association, on very favourable terms, on presentation of their card of membership. The hotel is well managed, very centrally situated, and Dr. Waite can confidently recommend it.

Besides the Compton, the Adelphi and North-Western hotels, together with the Washington and Lawrence's (Temperance hotels), are good houses, and conveniently situated for those attending the meetings.

Western Branch.

The fourth annual meeting of the above was held at the General Hospital, Cheltenham, on Saturday, the 5th inst., T. Cooke Parson, Esq., M.R.C.S., and L.D.S.Eng., in the chair. The following members were present :—J. T. Browne Mason, Exeter ; H. Mallet, Exeter ; J. V. Coker, Clifton ; H. B. Mason, Exeter ; J. F. Faulkener, London ; G. C. McAdam, Hereford ; E. Norman Washbourn, Taunton ; R. Harrison, London ; R. Rogers, Cheltenham ; W. F. Cockburn, Gloucester ; J. Smith Turner, London ; Dr. Walker, London ; C. A. Hayman, Bristol ; R. E. Stewart, Liverpool ; H. Campion, Manchester ; Jas. Robertson, Cheltenham ; A. G. Levason, Hereford ; Chas. Gaine, Bath ; Sidney Wormald, Stockport ; S. G. Hayman, Clifton ; J. S. Crapper, Hanley ; G. Cunningham, Cambridge ; Alfred Rogers, Cambridge ;

E. Apperley, Stroud ; Dr. W. Waite, Liverpool ; E. Burgh, Cheltenham ; S. A. Wilson, Bangor ; J. W. Marks, Clifton ; Claude Rogers, London ; D. Watson, Torquay ; J. Marks, Newton Abbott ; W. Pierce, Bristol ; W. W. Graham, Newport ; R. R. Morrison, Barnstaple ; Jas. Parkinson, London ; W. A. Hunt, Yeovil ; Oakley Coles, London ; John King, Bath ; Wm. Pooley, Cheltenham ; Joseph Weeks, London ; C. Spence Bate, F.R.S., Plymouth ; W. M. Pearson, Bristol ; F. H. Balkwill, Plymouth ; A. Gabell, Red Hill ; W. R. Wood, Brighton ; T. T. Genge, Clifton ; F. G. Hatton, Bristol ; E. E. Brand, Exeter ; J. H. Gartrell, Penzance ; E. J. Gregory, Cheltenham ; and W. V. Moore, Plymouth, &c., &c.

Mr. W. V. MOORE, the Hon. Sec., read the Report of the Council, which was as follows :—

The Council of the Western Branch of the British Dental Association reports that its third Annual Meeting was held at Bristol on the 30th of July, 1881, under the presidency of Thomas Cooke Parson, Esq., M.R.C.S. and L.D.S.Eng., whose address on the occasion was published in the current number of the Journal of the Association. At that meeting it was unanimously resolved, 'That this Society should henceforth be a Branch of the British Dental Association, and that the officers of the central association and of its various branches shall be (*ex-officio*) members of this Branch.'

The Council recommends, in consequence of this affiliation, that the bye-laws of the society shall be amended in accordance with the rules of the central association, and be brought before the next Annual Meeting, to be held at Cheltenham under the presidency of Richard Rogers, Esq., L.D.S.I.

The Council has pleasure in reporting that the area of the Branch has been enlarged by the addition of members from the towns of Hereford, Pembroke, Tenby, Haverfordwest, Swansea, and Cardiff, and they cordially hope that its influence for good is being felt throughout the district."

Mr. BROWNE MASON, the Treasurer, then reported that the finances of the Branch were in a very satisfactory state. The receipts from subscriptions during the past year amounted to £25 10s., to which was added a balance of £17 11s. 6d. brought forward from the previous year, making in all £44 1s. 6d.; whilst the expenditure amounted to only £14 16s. 1d., leaving a balance in his hands of £29 5s. 5d.

Mr. C. SPENCE BATE then rose and said that when the Council met on the previous day it was found that the proposition which the Council was prepared to recommend, and which had gone forth in the bye-laws, was not in accordance with the articles of the British Dental Association. It was the speaker's object to draw attention to the alterations that would be necessary in the bye-laws, and the society would also be asked to pass a resolution which should make all the members of the Western Counties Branch, members of the British Dental Association. Bye-law 5 will then read as follows—"Any Dental Practitioner who can subscribe to the conditions laid down in bye-law 4, and who has been recommended as eligible by any three members of the Branch may be elected a member by the council." Under this bye-law they had elected several members the previous night. Bye-law 6 went on to say—"the subscription to those who are members of the British Dental Association shall be 5s. annually; to those members who are not members of the British Dental Association it shall be half-a-guinea, and they shall have no vote upon questions affecting the central association." The speaker went on to say that they could not have two kinds of members such as their bye-laws intended to make, namely, those that were full members of the British Dental Association, and those who were simply members of the Western Counties branch. Mr. Bate deprecated the idea of splitting the society into two classes, viz., associates and members, as this must eventually lead up to class distinctions in the form of different grades of qualification. He should, therefore, propose that the bye-law should read:—"Any Dental Practitioner, who, being a member of the British Dental Association, can subscribe to the conditions laid down in bye-law 4, and who has been recommended as eligible by three members, shall be eligible to be elected a member by the Council of this Branch." He hoped by adopting the course he proposed they would induce all their members to join the Association, and so strengthen their position. He then formally proposed the following resolutions,—“That the bye-laws that have been printed and circulated among the members be taken as read,” and “That, in rule 5, the words ‘being a member of the British Dental Association’ be added after the words ‘Dental Practitioner,’” and, “In rule 6, all the words after ‘annual’ be omitted.”

Mr. J. T. BROWNE MASON seconded this proposition.

Mr. BALKWILL said he did not wish to make any opposition to this

proposition, but he would like to say that they would really pay a guinea to the British Dental Association, and 5s. to themselves. Now, in his opinion, the great use of such an Association as theirs was the holding of meetings, such as the one they were then assembled at, and for this a small subscription would suffice. He had the greatest possible faith in the British Dental Association, but he had not got beyond that.

Mr. OAKLEY COLES said they were simply asked to pay a guinea annually to maintain the Political Power or Central Association, and 5s. a year to keep up their own.

Major R. E. STEWART said the treasurer of the parent society was present, and no doubt he was boiling over to say a few words. Speaking for himself, he might say no one was more decidedly in favour of holding these branch meetings than he was. It was the only stimulant they had, and the sum of 5s. annually as a subscription to the Branch was a mere trifle.

Mr. J. PARKINSON, of London, said it seemed to him that the discussion had resolved itself into a squabble about 5s.—that was what it really came to. The British Dental Association up to nearly the present time, had been conducted by gratuitous labour, but it had proved very hard work. The speaker also advocated co-operation of the Branches with the central Association, because the branches of themselves would be simply helpless.

Mr. CAMPION reminded the members that they each received a copy of the journal from the Parent Society, which was worth something. The treasurer had told them that their funds were in a very flourishing condition, and he thought it was quite open to them to reduce the subscription to the Branch to the smallest amount necessary to defray the working expenses.

Mr. J. S. TURNER having made a few remarks,

Mr. C. SPENCE BATE mentioned that the Western Counties Branch was in existence before the British Dental Association. It was for them to say whether they would allow people to join as members only or also as associates.

Dr. WALKER said that they were affiliated with the British Dental Association, and it was their duty as loyal members to carry out the articles and rules of the association. The only question was whether the subscription of the Western Branch should be 5s. or 2s. 6d., or, as Mr. Campion said, a shilling.

Mr. MORRISON said he was one of those individuals who paid 10s 6d., and therefore represented those who were likely to be

turned out. He had been a member from the first. Without being presumptuous, he doubted whether they had the power to ask him to retire. He, for one, should be quite happy to join the head association, and pay the extra guinea, for he thought nothing would be done so well, if they did not join in a large body. Their journal, no doubt, was carried on as it ought to be, and showed considerable talent. On the other hand, many of them took in other journals, which was almost the same thing, for they found the same reports of meetings in all of them.

Mr. C. SPENCE BATE announced that the members who paid 10s. to the Treasurer, and declined to join the association, had dwindled down to six or seven.

The amended resolution "That the word 'Branch' be inserted where Association stands, and that in rule 5, the words 'being a Member of the Association' be added after the words 'dental practitioner,' and in rule 6, all the words after 'annually' be omitted," was carried unanimously.

Mr. OAKLEY COLES moved "That papers read be the special property of the British Dental Association for publication in the journal, and that the Association should have the exclusive right over them."

Mr. SMITH TURNER seconded the resolution, and, as a London member, repudiated anything like a wish to centralize the association. The British Dental Association would meet in Liverpool at the end of the month, but it would meet somewhere else this time twelve months, and so on all over the country, but it so happened that most of the members of the Business Committee resided in London. According to the articles of the Association, they had an office in London, which was the office of the Central Association, but the Association belonged to the country, and its meetings were held in different parts. If they gave up their papers to the editor of the journal, they were not forfeiting any of their privileges, as they were all members of the same body.

Mr. BALKWILL moved a slight alteration of the resolution "That all papers read be the especial property of the Branch Association, and published in the journal subject to the approval of the Branch council.

Mr. OAKLEY COLES said if papers were made the property of the association their publication or otherwise might be decided by a Publication Committee, chosen by the whole association. He desired to relegate this duty from the branches to a representative body elected by the whole association.

After some further discussion the amendment was negatived, and the original motion was carried by a large majority.

It was then decided to hold the next annual meeting at Yeovil.

Mr. T. C. PARSON read a short address as retiring President, in which he reviewed the work of the past year, and said he was glad to have as his successor one so well known and esteemed as Mr. Richard Rogers.

On the motion of Mr. FAULKNER, seconded by Mr. MALLETT, a cordial vote of thanks was passed to Mr. Parson, after which Mr. Rogers, who was loudly applauded, read his Presidential Address, which was as follows :—

Gentlemen,—Allow me, first of all, to thank you for the honour you have done me in electing me your President on this, the fourth anniversary of the Western Counties Branch of the British Dental Association ; an Association annually growing in importance, if we may judge by the increased number of branches, and the corresponding influx of members. I am fully conscious that there are many of my professional brethren who would more ably fulfil the duties of the office which I am called upon to occupy ; yet I am quite sure that there is not a gentleman in the profession who would more rigidly protect its honour and status, or one who would give a more hearty welcome than I do on this, the Association's first visit to Cheltenham. Those of you who find yourselves here for the first time will, I am certain, appreciate the charms of a town which has so long been noted as one of the most fashionable of watering places, and which is now one of the first educational towns in the kingdom. Should any of you during your stay find time to visit the surrounding neighbourhood, you will have no difficulty in understanding the attractions offered by Cheltenham, to both temporary and permanent residents. We are rich in remarkably pretty walks and drives, whether among the many near at hand villages, or the somewhat more distant hills, which not only add to the beauty and healthfulness of the town, but also repay the exertion of a visit to their summits, with extended views of the beautiful Valley of the Severn ; the prospect from Cleeve Hill and from Birdlip being second to nothing of the kind. For those whose tastes draw them to places of historical importance, it would be hard to provide more interesting spots within a short distance than Gloucester, Worcester, Tewkesbury, Malvern and Berkeley. Apart from those associations, which are more or less dependent on one's reading, memory, and imaginative powers,

such as the battles of Worcester and Tewkesbury, the siege of Gloucester, and the death of Edward the Second at Berkeley, there are the visible relics of that past which speak for themselves to the present. I need only specify the magnificent Cathedrals of Gloucester and Worcester, the recently restored Abbey at Tewkesbury, the famous Priory Church of Malvern, and the interesting remains of a well-preserved Roman Villa at Chedworth; while I have much pleasure in announcing that Dr. Wilson has kindly offered to conduct any member of this Association over the Ladies' College and the Delancey Hospital.

Turning, then, from the consideration of the place in which we are assembled, I must, after this brief introduction, ask your attention to a subject more immediately connected with the purpose of our gathering. I propose to offer for your consideration a few remarks on what may be called the subjective aspect of our professional life. There is an objective side, which is sufficiently prominent, but perhaps we are in danger of attributing to it more than its true value, and this may induce a corresponding forgetfulness of the subjective view. Only a quarter of a century back there was no definite or well guarded avenue by which the student of our speciality might enter upon his professional career. At best the opportunities of preparation were very scant, and the possibilities of acquiring experience, save in the department of dental mechanics, were comparatively unknown. In these circumstances the student was thrown almost entirely upon his own resources for the attainment of knowledge, for the acquisition of manipulative skill, and for the storing up of such experience as would enable him successfully to fulfil the functions demanded of him in dental practice. Many of us look back to those days as to times of darkness and disability, and justly so; yet it should not be forgotten that there were men who, in spite of the darkness, and in defiance of disability, bravely fought their way to renown and eminence as dental practitioners; and they did so by recognising the importance of the subjective elements of success, and by an energy that scorned to be dependent upon objective means. We all are rejoiced that the darkness has passed, and that in place of disabilities we have to-day abundant facilities; still there is a danger that some may rely *too* much on aids which are external, and neglect the full cultivation of the power and processes that are within. Dental schools, hospitals, curricula of study, opportunities of instruction and demonstration, examinations, accredited certificates of competence, these

are all admirable external aids to culture and development of the powers within. It would be impossible to exaggerate the value of the present facilities provided through the media of association, societies, periodicals, literature, &c., &c. The benefits derived from objective influences must, however, always bear proportion, not so much to the multiplicity and variety of the means themselves, as to the receptive power, or subjective condition, of those for whom those benefits are designed. A sumptuous banquet will replenish and satisfy the desire of a hungry man, but to him who is devoid of appetite, delicately prepared dishes are both useless and obnoxious. Let us then, very briefly, consider a few particulars of this subjective condition; and for simplicity's sake, we may arrange them in four separate classes.

First, It is, I think, hardly needful to contend for the cultivation of *self-reliance* as a prominent attribute of professional character. The spirit of self-reliance is the very root of vigour and strength. "Heaven helps those who help themselves," says the proverb—and Socrates said, "Let him that would move the world, first move himself." Men who have shone in science, literature and art, "The apostles of great thought, Lords of the great Heart," have all exhibited markedly the spirit of self-reliance. There is no walk in life wherein a man can safely rely entirely on others, nor is there any calling in which a self-reliant character is of a more essential value, than that to which we all belong. Self-reliance is not self-conceit, though it necessarily begets self-confidence. We need to rely on our perceptions, in order to diagnose the conditions of each case presented to our notice. We need to rely on our judgment as to the best mode of treatment, and so to rely as not to be moved by undue commiseration, or inopportune entreaty. We need to rely on our skill, so as to proceed calmly and carefully to the performance of our operations. Self-reliance begets confidence and inspires respect on the part of the patient, while at the same time it allows the operator, freed from anxiety, to concentrate all his resources upon the work before him. On the other hand, the absence of this quality renders the perception dull and obtuse, causes the judgment to halt and mislead, and, worst of all, it imperils operative success, through timidity and hesitation. Self-reliance needs not the assistance of self-assertion. The nature which is self-dependent, is for the most part self-contained. It asserts its power in action more than in speech, by moral influence rather than by laudatory expressions; nevertheless, when called upon to express an opinion, or give advice

and encouragement, the self-reliant man will express himself in a tone and manner calculated to convince and control his patient, to assure and comfort him. Self-reliance, invaluable as it is, cannot, however, do duty for any of the other necessary attributes of professional character ; *ergo*, it cannot be a refuge for ignorance. On the contrary, the only possible foundation of self-reliance is knowledge.

And this leads, naturally, to my second point ; viz., *Self-culture*. Gibbon says, " Every person has two educations, one which he receives from others, and the more important which he gives himself." Schools and hospitals may provide the first, but no power on earth can confer the second, if it be not inherent as a habit and purpose of life. No greater mistake was ever formulated than that conveyed in the expression " A complete education." For a professional career constant growth is essential, not alone to keep pace with new methods and discoveries, but to pursue by the help of practical experiment, the lines of study and investigation commenced in youth. Mr. Smiles insists that " self-culture should include the education of all parts of the nature—physical, moral, and intellectual—cultivate the physical powers alone, and you have an athlete, or a savage ; the moral only, and you have an enthusiast, or a maniac ; the intellectual exclusively, and you have a diseased oddity, it may be a monster. It is only by training wisely all three together that the complete man can be found. The ancients laid down the principle of all round education, in the old maxim " *Mens sana, in corpore sano.*" The Greek teachers embodied it in their practice of standing and walking while engaged in study. Milton described himself as " up and stirring early in the morning, in winter often ere the sound of any bell wakes man to labour or devotion—in summer as oft with the first bird that first rouses—to read good books or have them read, till memory have its hold full fraught." " In our day physical exercise is in danger of being neglected, education having become more exclusively mental ; and yet practical success in life depends far more upon physical health than most persons imagine. The capacity for continuous labour in any calling must of necessity depend on physical resource ; hence, as a means of intellectual work, it is of paramount import that physical training should not be forgotten." It is said that the Duke of Wellington, when once looking at the boys engaged in their sports in the playground at Eton, where he had spent his own juvenile days,

made the pregnant remark, "It was there that the battle of Waterloo was won." "The success of professional men depends in no slight degree in their organic stamina, and cultivated physical strength. A well developed thorax, thorough aeration of the blood by free exposure to a large breathing surface in the lungs, are positively necessary to maintain the full vital power on which the vigorous working of the brain depends," and in the profession to which we belong there are risks of a peculiar kind, which demand counteraction if we would escape them. The position of the body in which we require to sit at the bench, or stand at the chair, is often an awkward and unhealthy attitude. The inhalation of unwholesome breath, unavoidable in many of our operations, lays us open to peril of a most insidious order, unless we are careful to keep the standard of health above the level at which diseases ordinarily assail us.

To descend, however, from the general to the particular. The culture we need is threefold. First, *physical*. This includes several items: thorough cleanliness of body, cleanliness within as well as without; the avoidance during business hours, or better still the entire abandonment of those habits which tend to derange the digestion, and pollute the breath. Cleanliness in respect of attire is of no mean value to the man who wishes to cultivate himself fully. Good wholesome food taken at regular intervals—not an overloading of the stomach at irregular and prolonged intervals, leading to a craving for stimulants to make up the lack of nutrition. Regular daily exercise out of doors—winter and summer—and without too much respect for weather—a sufficient period of physical repose. These are only a few common-place items, but they relate to a subject of vast and real individual importance, consideration of which means personal comfort and happiness, while neglect surely involves the reverse. But while it is needful to secure a solid substratum of physical vigour, it must also be observed that sustained application is the invariable price to be paid for all mental acquisition. Without this, you have no more right to expect mental growth, than you would have to look for a harvest where no seed had been sown. There is a proverb which says, "He who has heart has everything." "Who doth not burn doth not inflame." The energetic and persevering who are careful to use up fragments of time in self-culture are ever the men who make progress, let the particular department of their labour be what it may. Drew studied philosophy while cobbling shoes; Hugh

Miller taught himself geology while working as a day labourer in a quarry ; Sir Joshua Reynolds was such a believer in the power of industry, that he held it possible to all men to achieve excellence if they would only exercise the power of assiduous and patient work. "If you have great talents, industry will improve them ; if you have but moderate abilities, industry will supply their deficiency. Nothing is denied to well directed labour, nothing is to be obtained without it." Buffon said of Patience, that it is Genius ; the power of great men consisting mainly, in his opinion, in their capacity for continuous working and waiting. In order to intellectual culture, there should be a wholesome and regular supply of mental sustenance. We are, perhaps, in these days liable to mere superficiality in knowledge. Newspapers and periodicals have superseded the more solid kind of literature to a large extent ; but the aliment provided in newspapers is insufficient, and we need to have some more definite and substantial food, if the intellectual side of our nature is to grow. General knowledge is invaluable to a Dental Surgeon. To be able to converse intelligently upon various subjects, and so divert attention, and render the time spent in the operating chair agreeable to the patient, is an important factor in our success, and this can only be done by him whose mind is well stored, and whose resources are continually replenished. The standard works relating to our craft should always be at hand for reference ; and turning to them at times of doubt, so far from being a token of ignorance, will be regarded as an evidence of thoughtful care, and desire to do the best we can. A general acquaintance with the processes of nutrition and circulation, the nomenclature and special features of ordinary diseases, some familiarity with the various methods of treatment adopted in special disorders, sufficient to enable us to understand and sympathise with those who suffer, a tolerable knowledge of one or more of the arts, music, painting, &c., and a fair idea of the latest scientific discoveries, together with the rare faculty of drawing out the conversational powers of our patients, all these are invaluable acquirements to a professional man, and they come as the reward of intellectual culture, sustained and methodical.

Then (if one may be permitted to notice a third department of self-culture), there is a part of human nature which cannot be neglected with impunity, I mean the moral character. In a professional career *character* is essential, and like a delicate plant, character needs culture and care, nourishment and protection,

Perhaps *integrity* may be mentioned as the first element of a good character. To be *true* in word and act, we must be true in thought and desire. This is not always natural ; it comes as the product of watchful and faithful obedience to a great principle, expressed in the golden rule of "doing to others as we would they should do unto us." No failing is more conspicuous than lack of veracity, and no virtue more sure of recognition than sterling integrity. *Punctuality*, in regard to engagements should characterise a professional man, and a dentist of all men. It not only systematises our labour and simplifies duty, but it has the peculiar attribute of begetting itself in those with whom we are associated. Patients soon learn that a dentist is or is not punctual in his appointments ; and, as a rule, they are gracious enough to assist him. Of course, as Shakespeare says, "'Tis not in mortals to *command* success," in this particular more than in any other, still the habit of cultivating punctuality will abundantly repay any man for whatsoever disappointment and difficulty he may have to encounter. This paragraph would be incomplete were it to close without reference to a subject which is becoming universally interesting at the present time—I mean the use of alcohol as a beverage. In this connection I shall content myself with remarking that nothing can be less in harmony with a high standard of professional character than the habit of taking stimulants at irregular intervals, so as to be in danger of meeting our patients with breath polluted by the odour thereof. With moral culture, even moderate talents, and mediocre attainments will obtain fair appreciation everywhere ; but on the other hand, the brightest genius, and the most highly cultivated faculties, will only evoke a pitiful recognition when associated with a moral nature deformed and degraded by coarse and irregular habits. This brings me readily to my third particular, viz., *Self-control*. There are few callings more exercising to human patience and self-control than the one to which we belong ; and very few days pass in which we are not made painfully conscious of the need for thorough mastery over our temper and our tongue. "He that ruleth his own spirit is greater than he that taketh a city." When patients come in declaring that our fillings have all come out, that they can do nothing at all with the set of teeth which we have constructed with the utmost care, and fitted in with conscientious exactitude—when some one more cheeky than usual vociferates in the waiting room, before several others, that we have left the root in of the

tooth we attempted to extract for him the day before ; and when other of the thousand and one annoyances of general practice occur, we need to have ourselves well in hand, to restrain the reply that rushes to our lips, to repress the frown that involuntarily beclouds our features, and preserve in unruffled serenity, both our inward thought and outward demeanour. There is but one foundation upon which self-control can rest securely, and it has but two component parts ; first, a knowledge of our individual weakness ; secondly, a conscientious discharge of every duty. If a man has a short temper, he should never forget the fact—if he has a gift for smart repartee, he should ever bridle his tongue ; if he has an inclination towards any habit (and there is a weak point in every human character), that is detrimental, or reprehensible, then his first and chief necessity is, to be fully aware of it himself, the diagnosis being half the cure. Next to this, there is no security against losing self-control so great as the testimony of conscience, that in each case as it presents itself we have faithfully and thoroughly exerted ourselves to the best of our ability.

There remains one further aspect of my subject, which I shall treat very briefly ; that is, *Self-contribution*. This is a clumsy phrase ; but I am fain to be content with it in absence of a better. Of all phases of human nature, the *selfish* is the most despicable ; and of all characteristics which command the admiration of others, and truly ennoble the nature itself, there is none so estimable, so exalted, or so attractive as the habit of living for the good of others, and striving to promote the happiness of our race. This is true as a general principle—and it is the very essence of our common Christianity. In relation to our profession, I mean by self-contribution the willingness to communicate of our knowledge and experience for the increase of the common stock. We never understand a subject so well as when we are making an effort to describe or convey our ideas to some one else ; and no greater fallacy has ever deceived mankind than the supposition that one loses anything by communicating knowledge to others. Facilities for interchange of thought, and comparison of experiences, are now abundant ; and the pleasure as well as the profit to be gathered from these facilities will always be proportionate, not to that which we acquire thereby, but to the extent of our endeavour to give of our own, whatever it may be, whether knowledge, or practical experience, or time, or

money, or labour. We have taken a new departure as a profession, and the roll of honour in future will contain the names, not of those who selfishly seclude themselves in the sacred satisfaction of their own surroundings, nor of those who come out of their shells once now and then, simply to pick up all they can, and then retire to enjoy the benefits thereof, but inscribed on the records of the future, there will appear in the foremost page, the list of those, and only those, who have been willing to spend and be spent, for the truest advancement of our most useful department of labour, and who have devoted their energies and their lives to the honourable purpose of promoting the comfort and happiness of their fellow men."

The company then proceeded to Alma House, the residence of Mr. Rogers, and, on the invitation of the latter, partook of a sumptuous luncheon, which was set out in a tent in his much-admired gardens. After luncheon, Mr. SPENCE BATE proposed a vote of thanks to Mr. Rogers for his splendid hospitality and Major STEWART seconded the proposition, which was received by the company with cheers for Mr. and Mrs. Rogers. The PRESIDENT suitably responded. A photograph of most of the members and visitors present was afterwards taken by Capt. Todd upon the lawn of Alma House.

The members then returned to the Hospital, where the business of the meeting was resumed. Several papers were read, followed by discussions, and some demonstrations were given. An interesting display of well-selected dental instruments and apparatus, contributed by Messrs. Ash and the Dental Manufacturing Company, attracted a good deal of attention. We regret that we are compelled to postpone our report of this Afternoon Meeting until next month.

THE DINNER

Was held in the evening in the mess room at the Plough Hotel, which was very tastefully decorated for the occasion. Captain Rogers, the president, occupied the chair, and the party, fifty-four in number, included the gentlemen whose names have already been mentioned, Baron de Ferrieres, M.P., and the following local members of the medical profession : Drs. Cottle, Gooding, Wilson, Smith, Simmonds, Newton, Cardew, and Ewbank.

The PRESIDENT, after dinner, said they would be sorry to hear

that a letter had been received from the Mayor, who was unexpectedly prevented from attending on that occasion. His Worship had just returned from Oxfordshire, and caught a severe cold, and therefore he asked them kindly to excuse his attendance at the dinner party. Letters, apologising for unavoidable absence, were also read from a number of other gentlemen. The President then commenced the toast list with "The Queen," "The Prince and Princess of Wales and the rest of the Royal Family," both of which were received with patriotic enthusiasm.

The Baron DE FERRIERES, M.P., then proposed "The Army, Navy, and Reserved Forces," to which Major STEWART responded in a facetious manner, his remarks affording great amusement to the company.

Mr. SPENCE BATE proposed the "Houses of Lords and Commons."

The Baron DE FERRIERES, M.P., briefly responded. Upon such an occasion politics were excluded, and the less he said of the matter the better. The members of both Houses were all jolly good fellows, and it might be taken for granted they were actuated by a desire to do what was best for the interests of the country, which, as a matter of fact, got on very well, no matter who was in power.

Mr. SPENCE BATE proposed "the Medical Profession," remarking that his brethren, since they were affiliated to that profession, should do like them, and progress as they had done. He hoped that before long everyone who joined the dental profession would have the full diploma of the medical profession, as there was little distinction between them. They went through the same preliminary education, and occupied the same amount of time, and were equal in degree, though not exactly in kind of knowledge, with the medical profession. The difference between the two curricula was hardly worth mentioning, inasmuch as the position was one which every one would recognise as the same. Some cases had, however, been brought forward lately, showing they had sometimes the same diseases to treat, and did, occasionally, step upon the feelings of each other, but if every dental practitioner took the full diploma, there could be no fear of treading on the toes of your neighbour. The consequence would be, he hoped, in a short time, that every young man who took the L.D.S. would also take the M.R.C.S., which would give him a standing in each profession. He proposed "the Medical Profession" with confidence and

pleasure, for although there might be occasional differences of opinion, they had had that day a cordial welcome and a helping hand from its leading members.

Dr. WILSON, who was received with applause, thanked the company for the manner in which they had received the toast, which had been proposed in such complimentary terms. He felt in addressing them as though he was addressing a near relation. It had not always been so. In the earlier and darker days of the present century the dental profession had alliances that were not recognised now. They knew that surgery some time before had the same alliances, but surgeons were not now hurt by reference to these. Perhaps in the last fifty years, there had been no part of the medical profession—and he liked to allude to the dental profession as a branch of the medical profession—there was no branch of the medical profession which had made such immense strides as the dental branch. This was owing to the Act of 1878, and to the excellent measures begun by their leading men in London and elsewhere, in giving such an excellent curriculum, and drawing out such an excellent scheme for the examination at the college of surgeons. With regard to the disabilities and disadvantages in connection with mechanical dentistry, they were utterly unreal. It was well said by one of their great artists when asked as to the mechanical part of art, how he mixed his colours, he said "With brains, sir." There was no doubt that any science or any profession, if it were directed by brains, and by educated brains, would find its proper place in the social fabric. They had only to look at papers which had been published—for instance those read at the International Congress in London last year—to see what admirable work the dentists were doing, not only as to their special scientific work, but work that would tell in all branches of science. Next week they celebrated the jubilee of the British Medical Association in Worcester, and he felt that this great association in meeting without representatives of the Dental Section, resembled a body with one limb lopped off. When they remembered how closely the tooth and jaws were connected with the health of the body, one could not possibly see what reason there could be for leaving the dental profession out altogether; medical practice and dental practice must always be closely allied. The one would rely on the other; if not, it would be worse for both. Medical men often found cases coming to them of obscure palpitation of the heart, or obscure

symptoms that depended on dyspepsia; and if he neglected to look into the patient's mouth to see what kind of teeth he had, and simply furnished an opinion from a medical point of view, he was simply mistaking his purpose, and it would have been much better had the patient seen the dentist, and then placed himself under the medical practitioner, and in this way the credit would be divided. With regard to his own personal feelings respecting dentists, he might say he had met them in many towns in England, and he had found them highly intelligent, and a kindly disposed class of men, who were willing to alleviate suffering even at great sacrifice and inconvenience to themselves. He could not sit down without saying one word about their President. He (the speaker) had known Mr. Rogers for more than 20 years, and he would not like to say all he felt, because he might bring a blush to his face; but he would say that whatever Mr. Rogers took in hand, he did with all his might, and he was perfectly convinced that as their President, they might feel confidence that he would always uphold the dignity of the Western Counties Branch of the British Dental Association.

Dr. GOODING and Dr. COTTLE also appropriately responded on behalf of the medical profession, the last named gentleman expressing a hope that dentistry, as a branch of the medical profession, might long continue to prosper.

The PRESIDENT, referring to the fact that the next toast upon the list was that of "The Mayor," regretted his worship was not present to respond for himself, and added that no man took a more lively interest in Cheltenham, or indeed in the county of Gloucester, and he hoped the Mayor might be spared to live among them for many years.

Mr G. PALMER proposed "The British Dental Association, and dwelt upon the assiduity with which the familiar friends around him, whom he knew years ago, had worked for the improvement of the dental profession.

Mr. J. SMITH TURNER, of London, who was received with applause on rising to respond, said the British Dental Association was a peculiar institution. It might claim something like apostolic succession. Some years ago a movement was set on foot in reference to dental reform, the result of which was a dental reform committee, which committee was the means of promoting a Bill in Parliament, which subsequently passed, and became the law of the land. Thereupon, the dental

reform committee called a meeting of the profession in Willis's Rooms, to give an account of its stewardship, and so pleased was that meeting with the account which the committee gave of how it had expended the money entrusted to its care, and how carefully it had husbanded its resources, that the members were unanimously chosen to be the founders of the British Dental Association, the first Association of the kind ever formed in this country. The last act of the dental reform committee was to vote the remaining sum of money in its hands towards the British Dental Association. That Association, therefore, had a sort of succession to build itself upon from the dental reform committee. That was a fact in its existence which carried it back even further than the first days of its formation. He had thought it necessary to mention these matters, as there were confused ideas in the minds of some members of the Western Branch that they only were the first original and only Jones. Well, the Association began a few years since, in a very small way, and for the information of their medical friends, whom they were glad to see present, and whom they highly valued, it might be as well to state that the objects of the Association were the elevation of the dental profession by holding meetings, by association and intercourse, by a public Journal, and by carrying out the spirit of "The Dentists' Act." That act provided that dental practitioners should be registered, and the course of the Medical Council, to whom the formation of the register was confided, was not wholly satisfactory. He was bound to say, however, although dentists had a just cause for grievance against the Medical Council, and although they had been very much disappointed with the way their business, in some particulars, had been conducted, it was the misfortune rather than the fault of the council that disagreeable and unjust things had occurred. He was glad of the opportunity of expressing his opinion, that in acting as they had done, the desire of the Medical Council had been to do justice, and if they had erred, it had been on the side of mercy. In the dental profession too many claimed to be members thereof. Medical gentlemen, who knew the history of their profession, knew that it had passed through a like disagreeable phase, and was none the worse for it, and he hoped, if the members of the dental profession kept together as they ought, they too, would find themselves well satisfied with their position. Remarks had been made about the education of dentists. The dental curriculum was equivalent in

every respect to the medical curriculum. Their preliminary examination was the same, their curriculum in the matter of time was the same, but at a certain stage, the dental student diverged from the course of study of the medical practitioner to study branches of his own speciality which could not be learned at a general hospital. There was that difference between a surgeon and a dentist. Many contended there should not be specialities, but it was clearly laid down by the authorities at Lincoln's Inn and elsewhere, that there was no immediate likelihood or possibility of training dentists at a general hospital. Although he did not consider it a bad thing for dentists to take an additional diploma, still he did not think it ought to be held out to the dental student as such a great and glorious thing as many people would have them believe, and he asked whether it was worth the while of an ordinary working general practitioner, who visited people for a small amount, and kept up a respectable appearance in life, to give two or three extra years of a young and vigorous life to additional studies, in order to become a fellow of a college of surgeons, or take some other higher medical qualification. The dental student was occupied for more than four years, if he studied his profession properly, for in addition to the four years prescribed by the curriculum, he must have studied one or two years in the workroom of some competent practitioner; whereas, in the case of general medical practitioners, four years only were necessarily devoted to the prosecution of studies. If the medical practitioner, who did not study dentistry, barely mastered his profession in four years, why should they expect the dentist to master it and his own profession as well in four years. He could not do it. And if the dental student was expected to devote an extra two years to study in order to take the membership of a college of surgeons, how was he to be paid for such an expenditure. It was not fair to dentists or to the public. So much then, for those matters. The British Dental Association had to see, among other things, that the rights acquired by their Act were not gradually frittered away. There was an obscure "association of surgeons practising dentistry," men who did not publish their names, but who had the effrontery to send a protest to the Royal Commission, urging that, as soon as possible, the Dental Act should be amended, and suggesting that gentlemen who had passed the preliminary examination and apprenticeship, and paid a heavy premium should be prevented from using the title of

dental surgeon, or surgeon-dentist, because, they said, he had not the full diploma. Was it fair such a suggestion should be made by any branch of the profession? He was glad to say the medical profession generally did not support it, but on the other hand had supported the progress dental surgery had made since it had been placed before them.

Dr. WALKER (London) said that for 25 years they had endeavoured to promote the welfare of the branch of surgery with which they were associated, and he agreed with his friend, Mr. Turner, that their curriculum occupied as much time as that necessary to obtain the diploma of the Royal College of Surgeons, as M.R.C.S., and also concurred with him that the curriculum, as at present constituted, was full and complete, and he thought that eventually it would be made still more stringent, but he did not go so far as those who said if it were thus stringent, it would never be necessary for any man to take the M.R.C.S.

Mr. OAKLEY COLES said he wished some member of the British Dental Association with more ability than himself had been called upon to respond to the toast, but he did not think he could give place to anyone who felt more interest in the dental profession or in the British Dental Association. As late editor and proprietor of the *Monthly Review of Dental Surgery*, he was the first to suggest the formation of the British Dental Association, but he little anticipated that he would have the pleasure and gratification of replying to the toast which had just met with such a hearty reception. It seemed wonderful that in so short a time the association should have organised itself into so powerful a body as they now knew it to be; but would they allow him to protest with all the force possible against its being thought to be chiefly a London association. It would be powerless unless it was worked thoroughly and efficiently by all the members. It was a provincial association in so far as was good for the ultimate achievement of great objects, and they must remember that in a great measure the association was indebted to the provinces for its powerful organisation. The meeting in Manchester was the first means by which they achieved the success they were then celebrating, and he thought they must recognise what they owed to those devoted members in the provinces who organised the meeting at Manchester and gave their time and powers to promote the cause of dentistry. The British Dental Association would become more powerful as it became more unanimous. If there was one thing that would tend

to promote the ultimate success of the association it was unanimity of purpose and unanimity of design, and this they had had shown to the fullest possible extent by the meeting held that day, in the town of Cheltenham. Evidence had been given that the Western Counties Branch was willing to subordinate itself to the rules of the British Dental Association proper, and thus whilst exhibiting a capacity for governing, it had shown also a capacity for being governed. It was impossible for them to succeed unless they were united, and this he felt sure all the members fully realized.

Mr. OAKLEY COLES then proposed the Press, in a felicitous and able speech, which was responded to by Mr. Cochrane.

Mr. PARSON proposed the Visitors, remarking that many gentlemen had come to their Conference as visitors, but had been so pleased with what they saw and heard, that they had determined to join the Association.

Dr. PRITCHARD, of America, and Mr. WOOD responded to this toast, which was the last on the list.

ORIGINAL COMMUNICATIONS.

On the Filling and Treatment of the Permanent Molar Teeth, between the Ages of Six and Fourteen Years.

BY GASCOIGNE PALMER, L.D.S. Eng.,*

MR. PRESIDENT AND GENTLEMEN,—The subject I have chosen is of such exceeding interest, of such vital importance, to all who are really interested in Conservative Dentistry, that it seems to me that I could more easily write a book on it, than a paper. I am, moreover, far from being an adept in the art of putting a great amount of matter into very few words, but as there are seven other papers to be read this afternoon I will try to make this one as short as possible.

First of all, who is there here present who, on looking into the mouth of a new patient, say twenty years of age, has not very often been, well, almost scared by the small amount of mastication performed by the first and second molars of the second set of

* Read at the Annual General Meeting of the Western Branch, held at Cheltenham, on the 5th inst.

teeth. Now those eight teeth ought, if they were all good, to do certainly three-fourths of the grinding of the food and one half of the process of thoroughly salivating it, if I may be allowed the expression, a very necessary process to the perfect digestion of the food. Well, what do you often find? One, two, three, four, five, six, seven, eight, all gone; the wisdom teeth well cut and hanging over towards the front of the mouth, like anything rather than a molar tooth, offering little or no masticating surface; the alveolar process of the jaw absorbed, the bicuspid standing with the cementum as much bared as though the patient was fifty; the incisors showing most unmistakeable signs of being used for what they were not intended, and the bicuspid of doing more than they were intended to do.

Take another case: all the molars are present, but what a condition the mouth is in. All the molars encrusted with tartar, breath foetid, tongue foul, patient nervous and complains that "these teeth, you know, they are so tender I can't bite on them, and they sometimes ache very badly. Would it not be better to have them all out and have some new ones, for they have been stopped so often and I don't believe they will ever get better." Such is the wail of many a disheartened patient. Now when we come to think that in both cases the patient has been in the habit of going to respectable dentists, and having done whatever has been recommended—how is it, I ask, that we see so many of such cases? I know of hundreds of such instances with various differences; I have simply stated two extremes. Why, because there is no regular systematic way of treating molars when the pulps are large, often small hair-like fibres taking abnormal positions, the dentine so elastic that a solid plug of gold, when put in, will press down on the too sensitive pulp—the dentinal tubes so moist that thermal changes are instantly felt whether the tooth is unstopped or stopped with metal; in fact because there is a great deal too much of "Here's a hole, put something in it," in the minds of many an overworked dental surgeon; and "Well, I am sure I do the best I can," for an excuse. And so thousands of teeth are lost for all practical purpose, even if they are not taken out. How then is this sad loss of teeth to be avoided? First of all by not being in a hurry; don't do more than examine a mouth unless an appointment has been made. If you make a mistake in a hurried opinion, on another occasion you can correct it; but if you make a mistake in operating on a young molar tooth, I do

not believe you can correct it; and I do believe that in many instances where, through a mistake, serious periostitis takes place in a young tooth, the best thing is to extract the tooth, rather than run the risk of endangering all the teeth on that side of the mouth by the roughening of the enamel from want of friction in masticating.

Now, Sir, having laid before this meeting as briefly as possible the views which have induced me to read this paper, I will present to your notice three forms in which decay of the permanent molars present themselves to our notice, and I must ask you to bear in mind that my remarks apply to molars in the mouths of patients between six and fourteen years of age.

In order to simplify things as much as may be, we will say that all the cavities shall be coronal ones, and none of them ever treated before.

Class 1.—Shall consist of teeth that have a hole in them, but which have never even given so much as one single twinge of pain.

Class 2.—Shall consist of those that have given twinges of pain and which are affected by heat or cold.

Class 3.—Shall consist of those that have ached or are aching.

Taking the last first, let me say that no great amount of success will attend the treatment of these teeth if the patient be under fourteen, still less if under eight; they are either dead teeth, or in a fair way of becoming so, and with large pulp canals and apical foramina, the chance is that the ordinary applications for such teeth, the use of the nerve extractor, Donaldson's bristles, &c., &c., will set up some inflammation of the alveolar process, and in the end the tooth will have to come out, remain without a stopping in it, or be plugged with a risodontrophy hole in it for the exit of discharge, and so we will say no more on that class.

Classes 1 and 2 may be almost considered together, except as to treatment and plugging, and then Class 2 only requires more delicate manipulation and much greater care in the selection of the material used for filling.

Now, the thing that strikes me as of the first importance in Classes 1 and 2 is thoroughly to diagnose the fact, to our own most complete satisfaction, that they do not belong to Class 3; in other words, that there is no pulp-exposure and no inflammation, not even a little bit of the pulp itself. Being quite sure of

our way so far, the next thing to do is to prepare the cavity. I find as a rule the best way to do this is to cut away with an excavator the carious bone immediately under the enamel—not to go down to the floor of the cavity—and then break down the walls with an enamel chisel; or, if the patient be a very sensitive one, grind out with a cone-pointed corundum with the engine. Then, before going further, let me say this: if we are sure that there is no necessity to “destroy the nerve,” as the saying is, the use of arsenic for the purpose of getting rid of sensitiveness of dentine is simply unjustifiable. There is no way in which any one can court failure more certainly than by using arsenic in such a case. Although what I have just read is a slight digression, I shall not apologise for making it, for I fear that the practice of using arsenic for getting rid of sensitiveness in dentine is far too common; and, if there is anything I am glad to have had the opportunity of reading this paper for, it is for the purpose of putting my foot down on the reckless and indiscriminate way in which arsenic is used.

But to resume. Having got rid of all undermined enamel, and, in the most careful manner, of every atom of the softened dentine immediately contiguous, put on the dam, place the ejector in the mouth, and dry your cavity thoroughly; wait for a minute or two to see that all is as water-tight as you wish, then soak the softened dentine in Fletcher's Ether and Copal Varnish (a most valuable preparation, worth all the other things he ever brought out, except his stoves), and fill—well, with what? I use Ash's Rock Cement, and, if it is used really dry, I know nothing to approach it. But at all events don't use metal; the thermal changes are too risky to the preservation of the pulp in patients under fourteen years of age.

So much for Classes 1 and 2 taken together. But supposing we take Class 2 as wanting more care, which in my opinion it does, than Class 1, where is the extra care to be developed? In this: in taking greater care that the irritating properties of the preparations of zinc do not penetrate through the softened dentine overlying the pulp, and produce acute pulpitis. I will describe to you a mode I have used for the last four years with very great success—in fact, I do not know of a single failure, though, in this peripatetic town, where people are always going and coming, I dare say there have been some.

Having got the dam on to my most complete satisfaction—and

that means a certainty of no moisture finding its way to the cavity under treatment—I vary my manner of filling in this way : Having soaked the softened dentine in Fletcher's Copal and Ether Varnish, I take a piece of gutta percha tissue and force it down with small pieces of oiled Japanese bibulous paper until it thoroughly adheres to the softened dentine, which it readily does by reason of its being saturated with the copal and ether varnish, the ether dissolving a certain portion, no doubt, of the gutta percha tissue. In this way I have filled many teeth with oxychloride of zinc without the slightest after pain ; and I am sure that if any of you try this plan of mine, you will find out how many teeth may be retained alive in the mouths of young people that would otherwise most certainly “spontaneously” die, as it is supposed, and as I do not believe. True spontaneous death of the pulp is to my mind very rare.

Now, in conclusion, let me most emphatically say that I do not think any metal or any amalgam is as good for filling molar teeth in children under fourteen as a good oxychloride of zinc stopping ; and although small enamel fissures may be filled with gold without endangering the life of the tooth, still, at the same time, so predisposed are these molars to decay, that I think the probability is that the oxychloride would serve the purpose just as well, and, in these days of charging by time, cost a great deal less in putting in.

Sir and Gentlemen, I thank you very much for your kindness in listening to my paper, and I sincerely hope that its contents may be of some use, if not now, some day, in preserving those useful articles, the first and second permanent molars.

On the Relations of Pathological Concretions of the Tooth Pulp to Prosopalgia (Tic Douloureux).*

By DR. JOSEF ARKÖVY, Lecturer in the University of Budapest.

(Concluded from page 318.)

If we compare the experience gained in our case with those previously recorded, we shall perceive (1) that it was a genuine case of tic douloureux, and not an odontalgia in the ordinary sense of the term, which causes pain to be experienced by reflex action away from the affected point. (2) In the pulp there was no trace of dentine new formation, but there were seed-like amorphous calcareous bodies, together with splinter-shaped bodies of doubtful composition of which we shall speak later. (3) In our case we

* Translated specially for this journal.

saw that in forming a diagnosis, the "drilling pain in one or other of the teeth" (McQuillen), pain becoming less intense at night, as well as the effects of blows and pressure on the teeth, altered sensibility to heat and cold (Schlenker, &c.), could only be made use of to a very small extent. On the other hand we found that continued scratching on the teeth, sudden movement, and jarring, brought on fits of pain; and that in this disease of the pulp of non-carious teeth the diagnosis could only be arrived at, doubtfully, by the process of exclusion, and with tolerable certainty only by means of exploration. (4) I am convinced that trephining the teeth is the only curative treatment, really deserving the name, for prosopalgia arising from degeneration of, and new formations in, the pulp. Wedl and Witzel have, in conjunction, recently been pursuing investigations into the nature of calcification of, and calcareous deposits in, the pulp, to which I shall presently refer.

My investigations were made on the pulps of the first molar and the lateral incisor. They included the examination of nearly three hundred microscopic preparations. My mode of procedure was as follows:—I took the preparation out of the alcohol and soaked the parts from which I intended to cut my sections in a mixture of common salt and diluted hydrochloric acid, 10 parts and 5 parts to 100 of water. When the amount of calcification was less, I teased apart the tissue with needles. I then stained the preparation with carmine (Beale) or with hæmatoxylin solution, and mounted them with glycerine under a covering glass. The results of my investigations were as follows:—In these preparations I found that three different forms of concretions could be distinguished. (1) Large, rather hard, more or less spherical bodies, having a cell wall, and sometimes including one or two smaller globules, laterally disposed. These were rendered opalescent by hydrochloric acid, though they were not opaque even before being treated with that agent, and showed fine concentric markings. (2) There were also to be seen very small, but less numerous, hard, glistening, pearly bodies refracting the light strongly. (3) There were further to be distinguished cylindrical bodies of stratified formation and splinter-shaped, composed of a single lamella. These are softer, break and split easily. These three forms may occur mixed in the same tooth pulp, though this was not always the case. It was so in the first molar, but in the pulp of the lateral incisor (with but one or two exceptions) only the second and third varieties were found. It is impossible to determine with certainty

whether the point of origin of these bodies is to be found only at the centre or also at the peripheral part of the pulp ; it is, however, a fact that the first described variety is met with chiefly near the centre, whilst both the others have their seat away towards the periphery. The first form is shown at fig. 2*a*, the second at fig. 1*a*, and the third at figs. 3, 4, and 5*a*.

Besides these, there is yet another peculiar form, reminding one of a colloid body, which is seen at fig. 6*b*, and which was seen in the immediate neighbourhood of the preparation represented at fig. 2. These are the sections of round bodies, probably of globules, in whose interior two or three formations are to be seen resembling large nucleolated cells. (In the drawings some granules are to be seen ; it should be noted that this point in the preparation is in shadow, owing to extreme refraction of light.) These formations correspond, as regards size and composition, with the spheroidal bodies seen in Fig. 2, and as they are somewhat hard they render uncertain the acceptance of their colloid nature.

The globular, as well as the more dense cylindrical bodies are well known. Salter, Wedl, Baume*, and Witzel describe them as calcifications, occurring only in senile tooth pulp. The last-named author figures several spherical bodies, and takes the small fissures which are visible on them with a higher magnifying power, and the strongly refracting prominences jutting out from the uneven surface, to be dentine canals. But this seems to me erroneous. I, at least, could affirm the complete identity of our fig. 2 with those represented by him ; and yet in our case no one would think for a moment of "dentine new formation."

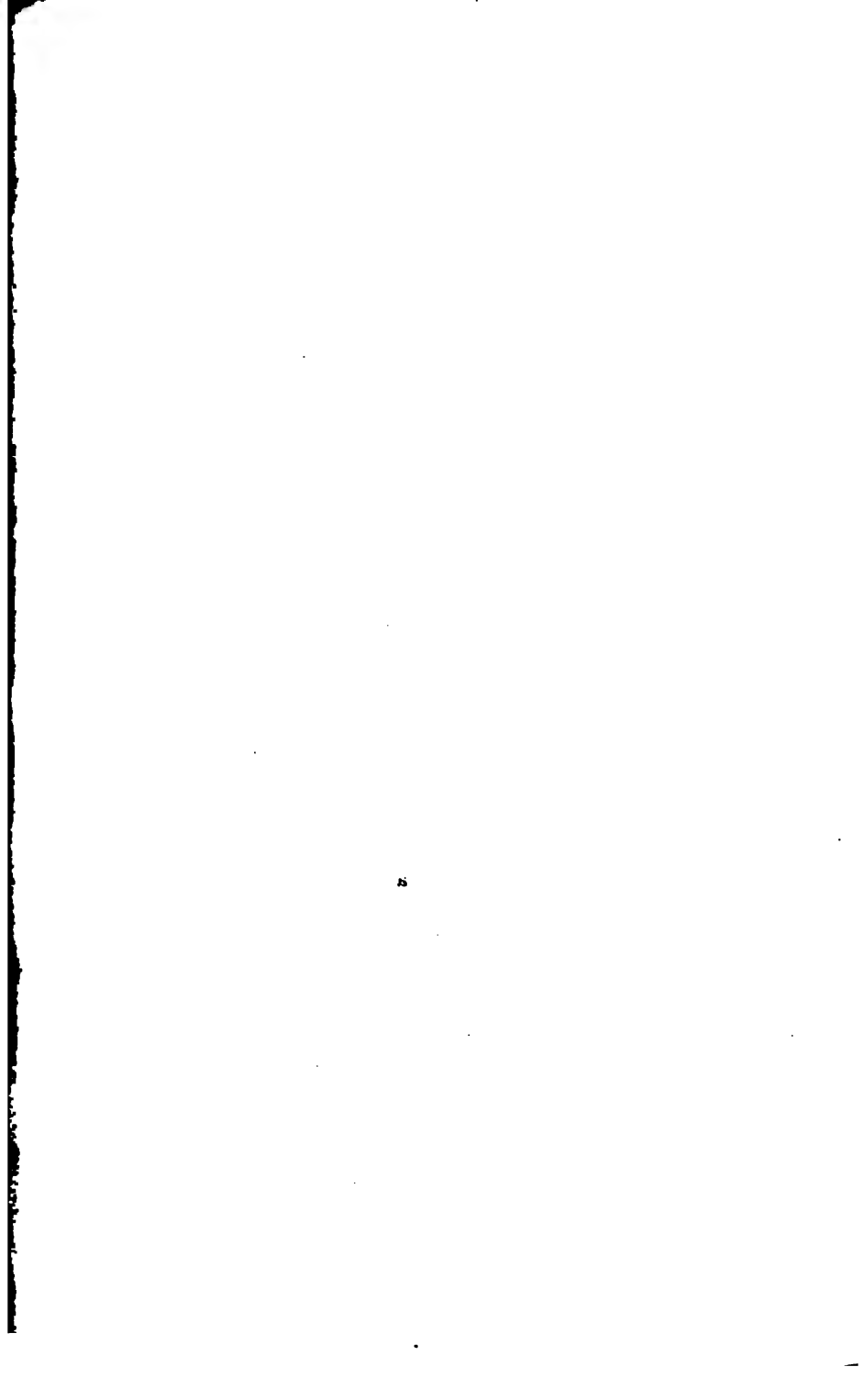
The large and small solid cylindrical amorphous bodies are to be found in great numbers embedded in the connective tissue of the pulp. I met with them in my preparations, particularly in calcified root pulps. The difference between the laminated thin fragile splint-shaped bodies in comparison with the calcified bodies surprised me. The drawings (*a*) in figs. 3, 4 and 5 render these forms true to nature. The points of origin of these concretions in the tissue of the pulp are characteristic. In the case of the large globular bodies, or of the larger solid cylindrical forms, we can form no idea, since they are too big for the field ; but the part in which the small bright pearly bodies, and the thin transparent shining splinters and lamellæ are found is extremely peculiar.

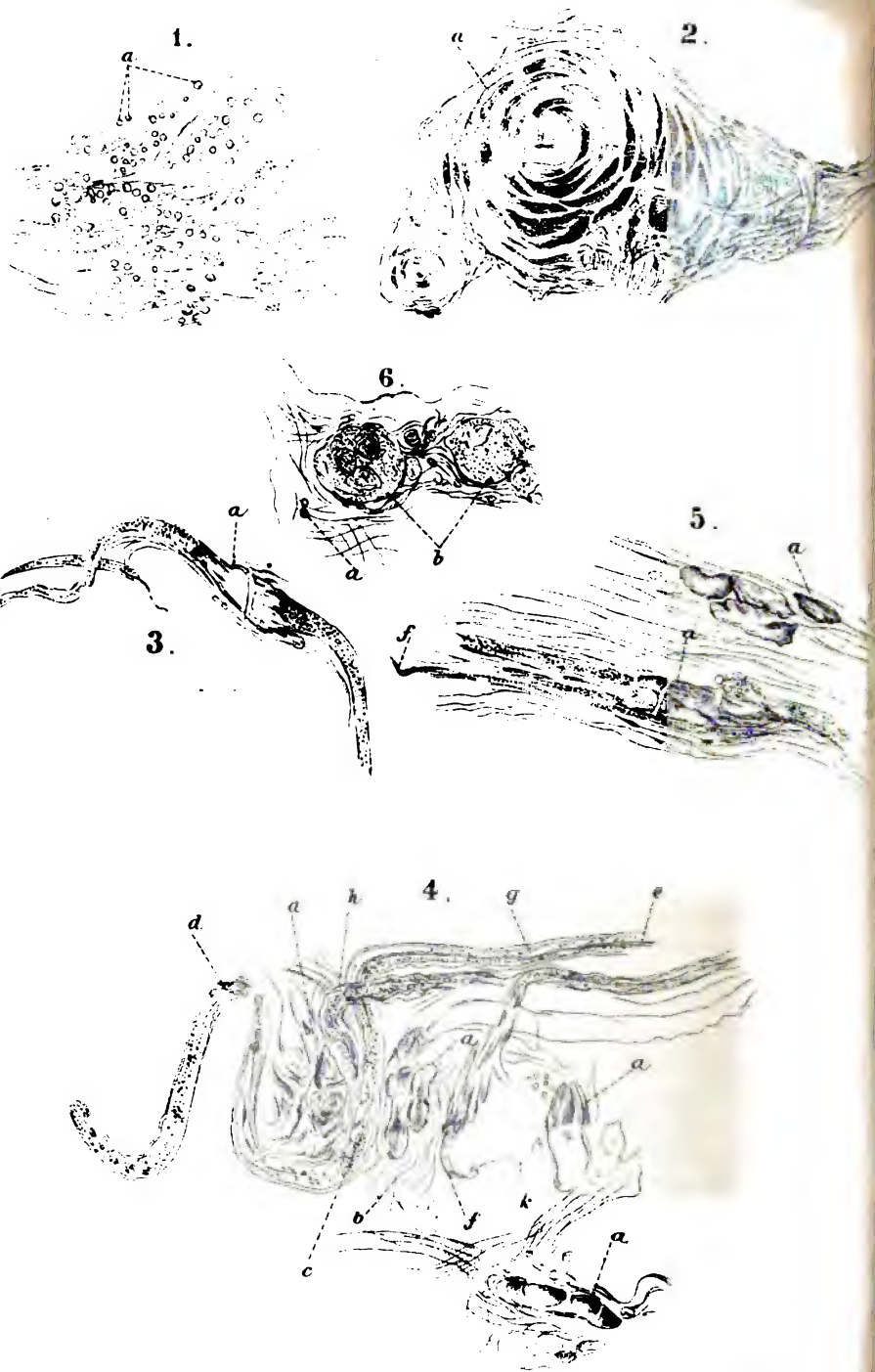
* R. Baume, *Lehrbuch der Zahnheilkunde*, Leipsic, 1877.

The first are clearly scattered about in distinct groups (the preparation is, of course, a good deal teased out) in the gelatinous interstitial matrix, as is shown in fig. 1*a*.

The second appears exclusively along the course of the nerve, on the side of it (fig. 4*a*), or actually lying over it (figs. 3 and 5*a*). The pulp tissue is generally pale and anæmic, the blood vessels being wasted, the larger central branches excepted, and generally scarcely visible; encrusted blood vessels I have not seen in this case. It is therefore evident that the pulp suffers from atrophy. Moreover, most of the nerves exhibit evidences of fatty degeneration. The persistent prosopalgia in our case is of very striking import when considered in relation to the discovery that at those places where the opalescent lamellæ of moderate lustre lie near the nerves, or covering the same, the fat globules are more numerous in the interior of the nerve, and even the trace of the axis cylinder has disappeared (fig. 4, *c*); whilst in the more distant part of the nerves few fat globules are to be seen, but little granular change even has occurred, and the axis cylinder is distinctly visible. Yet more remarkable is the fact that in two very successfully displayed preparations I found the nerve covered with a laminated sort of splint, and that on the other side of the splint, where the continuation of the nerve might be expected, the axis cylinder alone projected, and displayed, in a surprising manner, the same light-refracting qualities as the splints themselves (figs. 4 and 5*f*). Out of the axis cylinder there branches at this spot a thin, bright axis-thread; in fig. 4, *f* and *k* show this condition clearly, and a similar degenerated axis-thread is also to be seen on fig. 5, *f*. (N.B. The drawing of fig. 4, *f* is three times as broad as it ought to be.)

The last mentioned forms, and the peculiar place of their appearance, lead to the suspicion that, considering that their light-refracting properties differ from that of lime, and further their deviation in form also from known calcareous deposits, we may perhaps have to do in this case, not with concretions of carbonate of lime, but with a material of different composition. I was confirmed in this idea by the microscopic and micro-chemical investigations made by Professors Thanhofer and Plosz, which, however, have not actually determined the nature of these bodies. Tests for fat, stearine, and cholesterine were applied, but gave no result. The reagents which were used were chloroform, sulphuric acid,





caustic potash, iodine and sulphuric acid, and acetic acid; for staining, methyl-violet and chinolin.

As these splints are thin and firmly adherent to the tissue, they become hidden in the chemical treatment, owing to the contraction of the tissue, and this renders the investigation extremely difficult. It is, however, a fact that these forms give no bubbles of carbonic acid on the addition of hydrochloric acid, and they, therefore, do not consist of carbonate of lime. I do not wish to consider this assertion as finally conclusive, since the results of previous micro-chemical investigations do not justify it; I would only give expression to my own strong doubts and the reason for them.

On the other hand, I should state that most of the larger globules do consist of carbonate of lime, which, when acted on by hydrochloric acid, leaves a residue resembling coagulated-albumen. I must, however, mention the fact that the spherical body, represented in fig. 2, even after two days maceration in a mixture of hydrochloric acid and common salt, still preserved a harder consistence on section than would be the case with organic matter, and, as appears in the drawing, does not afford any evidence of organic structure.

I must call the reader's attention to two points which are not apparent on the drawing; in fig. 4 two laminated splints will be seen at (*b*), lying near the fattily degenerated nerve, which are indistinctly surrounded by a strongly refracting network of a silky lustre, which gave me the impression as if the larger spherically-formed concretions might be formed around this as a nucleus, in the same way as the smaller spheroids appear to be formed out of the small pearly bodies already described.

The second point is that both in fig. 3 at (*a*), and in fig. 5 at (*a*), the splint covering the nerve cannot be separated from it in the least, and this gave me the impression that the neurilemma of the fattily degenerated nerve was implicated in this pathological change. And the apparently similar degeneration of the axis cylinder confirms this view (fig. 4, *f*).

Whatever may be the chemical nature of this doubtful compound, it certainly deserves attention. The numerous preparations and the chemical tests have so far used up my material, that I cannot continue the investigations until I obtain another opportunity; and I must leave the chemical nature of these prosopalgia

causing bodies in the pulp as an open question for further investigation.

Deviating a little from our subject, I cannot refrain from making this remark. It is known that the pulp of the milk teeth, at the time when the crown of the permanent teeth begins to develop under them, almost always shows calcification in a greater or less degree, and yet the children do not experience the least increased sensibility in these teeth. Again, we find that when calcification of the pulp has occurred in cases of partial (or indeed almost total) chronic pulp inflammation, or of partial pulp gangrene, if a line of demarcation has been formed at the entrance to the pulp canal, and the root pulp has become changed into a calcareous cylinder, the process has gone on quite unnoticed. Then there is a third case; in this we find also calcareous formation in the pulp, but here we find the most fearful prosopalgia with all its accompanying symptoms. If we consider the first case to be one of simple involution, this accords well with the circumstances. If, in the second case, we regard the chronic inflammation with its latent symptoms as the factor, then we may consider this also as natural. But when we find that similar changes in the interior of outwardly intact permanent teeth, which in the former cases cause no pain at all, here cause the most intense suffering, we must involuntarily arrive at the conclusion that there must exist a real objective pathological difference between the two cases. My comparative microscopic investigations lead me to the same conviction, though not in a perfectly conclusive and satisfactory manner.

As regards the literature of this subject, I can cite the investigations of Wedl (op. cit. p. 184), who writes as follows:—"the nerve trunks are not unfrequently so hidden in the calcareous covering that it is only possible to get a sight of them after careful separation, and the medullary substance of the tubes often falls to pieces in rigid strongly refractive masses which do not quite fill the calibre of the tube (Atlas, fig. 47, *b*); the interstitial connective tissue of the trunks wastes away into membranous, more or less brittle, lamellæ." "The fact that the inner walls of the vessels show here and there through the calcareous casing proves that the outer sheath is the real seat of this calcareous incrustation." Further, at p. 185, he says:—"It is a point of special clinical interest that in spite of the deposit in the interstitial connective tissue of the nerve no painful sensation has been previously felt." "Under special circumstances, which are unknown to us and difficult

to identify, the calcareous conglomerations may probably become a cause of pain." Witzel (op. cit., p. 104) wishes to call the cylindrical shaped bodies in the pulp, when they are smaller, "dentinoid," the larger, on the other hand, he calls "calcification." Neither the one name or the other corresponds properly speaking with the facts.

The question now is, how to grasp the relation between the formation found in the pulp and the prosopalgia. The cessation of the attacks of pain immediately following the removal of the diseased pulp places it beyond a doubt that a causal relation existed in this case. We must, however, consider whether the changes found in the nerves and in the pulp tissue generally, (anæmic atrophy of the vessels) are primary, or have supervened as secondary effects, perhaps from the pressure of the foreign bodies. Since no decided answer can be given to this question, I may be allowed to sketch shortly my own idea of the diseased process. My patient being, no doubt, exposed to changes of temperature, probably caught a violent cold; and although we scarcely hear of such a thing as cold in the teeth, I consider it not impossible that such a direct cold may take place. In such teeth a short acute, but probably persistent latent chronic pulpitis may appear. It is a matter of experience that new formations are most frequently to be found in the pulps of teeth which are attacked by caries, or, in a word, of teeth which have been for some time exposed to external irritation, and have suffered from acute pulpitis. This is the case also with the pulp of the milk teeth. We must, therefore, either think that inorganic new formations, originated by such a chronic inflammation, have by pressure produced atrophy, and then by constantly increasing pressure on the nerves, called forth neuralgia, by which I mean a true tooth neuralgia; which process has gone on to the cessation of the nerve functions and fatty degeneration of the nerves; though the neuralgia would not cease until the axis cylinder was destroyed. Thus we saw that the attacks of pain continued, although the nerves of the pulp were degenerated round their axis cylinders, which, although only supported here and there, still remained perfect.

Or we can regard the prosopalgia in this case from a neuropathological point of view. Nerve pathology and the attempts which have been made in this province up to the present time, have not yet offered any other explanation concerning the essential

changes of the sensitive nerve apparatus in neuralgia than that we have to do in neuralgia with a distinct and peculiar form of disturbed nutrition in the sensitive nerve apparatus.* Catching cold is considered to be the chief cause of this trophic disturbance; and the material pathological changes, the essential nature of which is not yet known, are explained by the hypothesis that the complete, or partial, paralysis of the vaso-motor nerves causes a perverted nutrition which, in its turn, leads to the fatty degeneration of the nerves.

If then we look at our case in this light, that is to say, if we take it for granted that the external influence which causes the disease acts in the first instance upon the vaso-motor nerve apparatus of the face and of the jaw, then the pathological changes are of only secondary origin. I, for my part, think that the case we have before us was a genuine typical peripheral neuralgia, which originated in ideopathic disease of the tooth pulp.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The General Medical Council.

Saturday, July 8th; continued from page 354.

The following communications with regard to Dental Students were then read:—

“Edinburgh, October 31, 1881.

“MY DEAR MR. MILLER,—As you are aware, during the autumn, some questions have arisen as to the meaning of the Regulations of the GENERAL MEDICAL COUNCIL relating to the education, preliminary examination, and registration of Dental Students. I am desirous that you should bring the matter before the EXECUTIVE COMMITTEE, so that more specific regulations may be framed.

“1. In the ‘Dental Curriculum’† approved by the GENERAL MEDICAL COUNCIL nothing is said of apprenticeship. A certificate of having been engaged four years in professional study is required. Medical Students are allowed to count one year of apprenticeship as one of the four years of professional study. Ought not Dental Students to be put on the same footing?

“2. Three years’ instruction in Mechanical Dentistry is required. It is not stated if these years are to be during the four years of professional study, or may be taken, in whole or in part, antecedent to registration as a Dental Student.

* D. W. Erb, *Handbuch des Nervensystems*, Leipsic, 1874.

† See *Minutes*, Vol. XVI. p. 250, or *Dental Proceedings*, p. 121.

"3. It seems advisable, therefore, that the expression 'four years in professional studies,' should be more precisely defined. Is it to mean: (a) four years in a dental school or hospital; or (b) may one year of apprenticeship count as one of the said four years; or (c) may one or two years passed as a Mechanical Dentist in a dentist's workshop similarly count?"

"4. May the time spent under (b) and (c) of (3) be regarded as a legitimate portion of the specified four years, even if spent before passing the preliminary examination in Arts, that is to say, before registration? It seems to me only reasonable that some portion, if not the whole, of the three years to be spent in Mechanical Dentistry should be allowed, even if taken before registration, since there is nothing rendering a literary examination necessary previous to entering on workshop duties, as there is prior to entering on a course of scientific lectures; and secondly, it will scarcely be practicable to go through an efficient training in the workshop, if during the same period the Student's time is to be occupied in attending several courses of lectures, and in following the practice of a dental hospital.

"Believe me, very truly yours,

"WM. TURNER."

Professor TURNER's letter having, by order of the EXECUTIVE COMMITTEE, been forwarded to the various Dental Examining Boards, with a request that they would take it into consideration and favour the EXECUTIVE COMMITTEE with any observations thereon, the following communications have been received in answer thereto:—

(A) From the ROYAL COLLEGE OF SURGEONS OF ENGLAND:—

"Lincoln's Inn Fields, W.C.,

"22nd day of December, 1881.

"SIR,—I have submitted to the Council of the College your letter of the 22nd ultimo, forwarding a copy of a letter from Professor TURNER in reference to Dental Students, and a copy of a resolution thereon of the EXECUTIVE COMMITTEE of the GENERAL MEDICAL COUNCIL, and requesting that the Council will favour the EXECUTIVE COMMITTEE with their opinion thereon, and I am desired to reply thereto as follows: First, in respect of the questions raised in Professor TURNER's letter under the head (a); and, secondly, in reference to the *Resolution* of the EXECUTIVE COMMITTEE under the head (b) viz:—

"(a) *Professor TURNER's questions.*

"(1) That the four years' curriculum for a Dental Student required by the regulations of the College includes apprenticeship.

"(2) That the three years' instruction in Mechanical Dentistry required by paragraph 9 of the College Regulations can be taken con-

currently with the other parts of the curriculum, and be included in the four years, but not in any case before the passing of the necessary Preliminary Examination.

"(3) That, in the opinion of the Council, it is not necessary to more precisely define the expression 'four years in professional studies,' as from the College Regulations it is believed that Candidates for the Dental Diploma clearly understand that the whole curriculum of professional study can be completed within the four years; that the expression 'four years' does not mean (a) 'four years in a Dental School and Hospital'; that one year of apprenticeship (b) does count as one of the four years; and that two years passed as a Mechanical Dentist (c) do count as two of the four years, as it will be seen, on reference to paragraphs 3, 4, 5, 6, 7, 8, 10, of the College Regulations, that the rest of the curriculum can be completed in two years.

"(4) That the time spent under (b) and (c) cannot, by the College Regulations, be considered as a legitimate portion of the specified four years, if spent before passing the Preliminary Examination in Arts, for, as has already been stated in answer to Question 2, in no case can any part of the curriculum be taken out before passing the Preliminary Examination.

"(b) *The Resolution of the EXECUTIVE COMMITTEE* :—*

"That the Council cannot consent to admit to examination under conditions more or less exceptional, Candidates who have commenced the study of Dentistry since the 8th of September, 1859, inasmuch as the curriculum of professional education laid down in the College Regulations has been for many years in force, and has been required hitherto of all Candidates excepting those who either had commenced the study of Dentistry or had been in practice as Dentists before the above-mentioned date.

"I am, Sir, your obedient servant,

"W. J. C. MILLER, Esq

"EDWARD TRIMMER,

"*Secretary.*"

(B) From the ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

"The Royal College of Surgeons having received a communication from the MEDICAL COUNCIL relative to certain points in connection with the Dental Curriculum and Examinations, as well as in respect to Clause 37 of the *Dental Act*, the President's Council, along with the Dental Examining Board, met for its consideration, when it was resolved that the following reply should be sent to the MEDICAL COUNCIL :—

* The Resolution here referred to was as follows :—"That the Registrar be directed to call the attention of the Licensing Authorities to the last part of Section 37 of the Dentists' Act, and to suggest whether it may not be desirable to admit to examination, under conditions more or less exceptional, those students whose apprenticeship commenced before the passing of the Dentists' Act, and did not terminate before the 1st of January, 1880."—(*Minutes of the Executive Committee, November 11th, 1881.*)

"The principal questions submitted for the opinion of the College seem to be as follows :—

"(1) What constitutes 'a year' of professional study?

"2. Whether an Apprenticeship, general or merely mechanical, and current during such a year, should be counted as professional study?

"(3) Whether the three years' mechanical instruction in dentistry, required by the curriculum, may be taken *before* or must be taken *after* passing the Preliminary Examination?

"In reference to these questions the College has to submit :—

"(1) That 'a year' of professional study means a Winter and a Summer Session spent—*subsequently* to the Preliminary Examination—in following out such subjects as are prescribed in the MEDICAL COUNCIL'S tabular curriculum of March 26th, 1879.

"(2) That such a year may be filled up by an apprenticeship or by a period of instruction in mechanical dentistry—always provided such apprenticeship or period of instruction be *subsequent* to passing the Preliminary Examination and in accordance with the prescribed curriculum.

"(3) That the prescribed period of three years' instruction in mechanical dentistry, as specified in the curriculum, ought to be allowed to be taken at the option of the candidate either *before* or *after* the Preliminary Examination. But if taken before the Preliminary Examination it should not be allowed to count as any portion of the four years' professional study, or among the professional studies subservient for filling up these four years. At the same time the certificate of such three years *extra mural* instruction should in itself be valid, whether counting as such professional study or not.

"In reference to Clause 37 of the *Dentists' Act*, and to the question of admitting to the *Dentists' Register* and to Examinations candidates whose apprenticeship terminated before January 1880, this would appear capable of being more easily arranged were the *commencement* instead of the *termination* of such apprenticeships made the ground of admissibility. In this way the longer apprenticeship would not be placed at a disadvantage to the shorter one, supposing both to commence at the same time and only the shorter one to terminate by 1880. The difficulty might be met by admitting to the Register and to Examination *sine curriculo* all those whose apprenticeship began before 1875. The *sine curriculo* Examinations, however, to be in all respects the same as for *curriculum* candidates, with the exception that no Preliminary Examination should be required. Signed in name and by appointment of the Royal College,

"JAMES ROBERTSON, *Secretary*.

"Edinburgh, December 15, 1881."

(c) Communication from the FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW:—

"26th December, 1881.

"SIR,—Referring to your communication of 22nd November ultimo, I am instructed to inform you that the Council of the Faculty are of opinion,—

"(1) That Dental Students should be engaged in acquiring professional knowledge for a period of four years subsequent to Registration.

"(2) That of this period apprenticeship or employments in the work of Mechanical Dentistry may count for *one year*.

"(3) That of the three years to be spent in acquiring a knowledge of Mechanical Dentistry, the entire may be spent antecedent to Registration.

"Yours truly,

"ALEXANDER DUNCAN,

"W. J. C. MILLER, Esq., B.A.

Secretary."

(D) From the ROYAL COLLEGE OF SURGEONS IN IRELAND:—

"Dublin, *January 14, 1882.*

"GENTLEMEN,—With reference to Professor TURNER'S letter, I am directed to inform you that this College has not hitherto admitted to its Examination for the Diploma in Dental Surgery other than gentlemen on the *Dental Register*, and, as at present advised, the question referred to will not arise.

"I have the honour to append, on the other side, a copy of a resolution passed by the Council of this College, from the terms of which you will see that the privilege of Examination, *sine curriculo*, has been extended to all such gentlemen who have had their names inserted on the *Dental Register* in accordance with the provision of the Dental Act. These gentlemen are entitled to every legal privilege, and seek in addition collegiate recognition, which, if worthy, they obtain after a searching examination, and for seeking which they deserve commendation.

"I have the honour to be, Gentlemen,

"Your obedient servant,

"J. STANNUS HUGHES,

"Secretary of Council.

"To the PRESIDENT and MEMBERS of the

"General Council of Medical Education and Registration.

"Resolution passed at a meeting of the President and Council of the Royal College of Surgeons, Ireland, held on December 15, 1881:—

"Resolved:—That in order to bring the Regulations, of this College into conformity with those of the two Colleges which are giving Examinations, *sine curriculo*, in Dental Surgery, the Regulation by which the Dental Examination, *sine curriculo*, in this College shall cease on August 1, 1881, be rescinded, and that in place thereof the Regulations of the Scotch Licensing Bodies be adopted, viz:—

"That Candidates whose names appear on the *Dental Register*, shall be admitted to Examination, *sine curriculo*', and that the same be notified to the GENERAL MEDICAL COUNCIL, together with the reasons that have influenced this Council in coming to this determination."

MR. TURNER :—This is a matter which comes before the Council in connection with a letter which was addressed by me, on the 31st October, 1881, to our Registrar. The questions raised in the letter were due to certain communications made to me by gentlemen interested in dental education, who pointed out to me that the regulations of the General Medical Council relating to the education, preliminary examination, and registration of dental students were on some points not quite so definite as they ought to be, and that the dental students, more especially in Scotland, were in very considerable doubt as to whether the apprenticeship, or a portion of the apprenticeship, would count as a portion of the four years of professional study required from them; whether the three years instruction required in mechanical dentistry would count either altogether, or in part, as a portion of these four years; and as to what the relation of apprenticeship and the term of instruction in mechanical dentistry was to the period of registration and the passing of the preliminary examination. Acting on suggestions which had been made to me by the gentlemen to whom I have referred, I addressed the letter to Mr. Miller. This letter was considered by the Executive Committee, and sent down to the various Examining Boards. The answers of those Examining Boards to the questions in that letter have been read. Those answers in course of time came back to the Executive Committee, which did not itself pronounce any decision on the subject, but requested me to consider the communications with reference to devising some resolutions upon the subject, and accordingly, in conjunction with Dr. Heron Watson, two resolutions have been framed, so that we may have an opportunity of discussing the points raised. The first is—"That one year's *bonâ fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study." This is merely bringing the educational arrangements for dental students into conformity with the arrangements for medical students. Medical students are required to give evidence of having spent four years in professional study, and apprenticeship may count as one of those four years. This is

merely asking the Council to affirm for dental students what it has already affirmed for medical students, namely, that one year's *bonâ fide* apprenticeship with a registered dental practitioner, *after being registered as a dental student*, may be included in one of the four years of professional study.

Dr. HERON WATSON seconded the motion, and Dr. BANKS having also expressed his approval of it, it was put to the vote and agreed to.

Mr. TURNER :—My second motion is "That the three years of instruction in mechanical dentistry, or any part of it, may be taken by the dental student either before or after his registration as a student ; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after passing the preliminary examination." This motion is intended to explain the regulations, because, as I understand from the teachers connected with the Dental School in Edinburgh, they consider that 'the regulations are obscure, and they want them properly defined. This resolution I think accurately defines the regulations and, if it is carried, the teachers and students will know exactly what the position of the term of instruction in mechanical dentistry is as regards the period of registration and the period of study.

Dr. HERON WATSON seconded the motion, which, he said, arose out of the question whether the dental student was to study for seven or for four years. According to one interpretation the student was to study mechanical dentistry for three years before passing his preliminary examination, and he was then to study the scientific part of his profession for four years more. That interpretation required of the dental student a much longer period of instruction than was required of a medical student before graduating in medicine. The resolution before the Council would set things right, and make the matter perfectly distinct to both the teachers of dentistry and the students.

Dr. STORRAR :—As I have been spokesman on one matter for the dentists, I may say that this arrangement would be thoroughly satisfactory to the British Dental Association.

Dr. LYONS said it seemed to him that the first part of the resolution was gratuitous, and an entirely unnecessary statement to make. The resolution in the first part stated that the dental student might do something which he did not want authority from the Council to enable him to do, nor was he offered any advantage if he availed himself of the permission which was there given him. It appeared

to him (Dr. Lyons) that the Council would be legislating in the direction in which it wanted to legislate if the first part of the motion were omitted.

Dr. WATSON thought Dr. Lyons had hardly apprehended the statement which had been made. The difficulty arose from the ambiguity of the regulation as to what relation the three years of mechanical instruction was to bear to the four years of professional study. On the one hand it was argued that the four years of professional study should be left wholly unoccupied by mere mechanical work, so that the student might devote his undivided attention to subjects of a scientific kind. On the other hand it was urged that it was a great hardship in the case of many students that they were not able to combine mechanical instruction with scientific instruction. It seemed to him that the motion solved the doubt which existed in the minds of both students and teachers, and also the Examining Boards, and therefore, although it might at first sight appear tautological, it really had an important bearing on the question which had been raised.

Dr. A. SMITH thought, as Dr. Watson had explained why the motion was made, that the Council should be very explicit, so that both the teachers and students should clearly understand it. Standing as the regulation did, it would be a great encouragement to students to take as much mechanical education as they could get, but if they were told that only so much as took place after their registration would be counted as part of the curriculum of four years, it would not have that effect.

Mr. TURNER, on the suggestion of Dr. Pitman, then varied his resolution by substituting for the words at the end, "passing the preliminary examination," the word "registration."

Dr. LYONS thought what was attempted to be conveyed was that it was desirable that students should have at least three years of instruction in mechanical dentistry. To affirm that would be a very suitable proposition.

Mr. TURNER :—That is already a regulation.

Dr. LYONS :—Then you do not really want this part at all. I should not press this, but that I have analysed it very carefully, and I am perfectly certain I am right. If that has been affirmed before, then you do not want it at all; if it has not been, I think you might say "That it is the opinion of this Council that three years instruction in mechanical education should be taken by the dental student," and then make the second part a separate resolution. By

inserting the word "registration" Professor Turner has made his point much more definite; but, at the same time, I hold that he has more pointedly and conclusively shown the absurdity of the first part, as it stands. I move, as an amendment, that the first part run thus:—"That in the opinion of this Council, it is desirable that the dental student shall spend a period of three years in the study of mechanical dentistry;" and let the second part stand as it is. The effect of that would be that the dental student would register in the first instance, and you would from the very beginning of his career have a definite control over him; you would have full information as to his conduct; you would bring him, as you do medical students, within the purview of the Council.

Rev. Dr. HAUGHTON :—I will second the amendment for the purpose of having my muddled views cleared up by Professor Turner. I do not understand what the point is.

Dr. HUMPHRY thought the Council could not do better than adopt the following:—"That the prescribed period of three years' instruction in mechanical dentistry, as specified in the curriculum, may be allowed to be taken at the option of the candidate either before or after the preliminary examination; but, if taken before the preliminary examination, it should not be allowed to count as any portion of the four years of professional study." That was what was meant.

Dr. LYONS :—That is open to the same objection.

Mr. TURNER thought Dr. Lyons and Dr. Humphry had both failed to apprehend the point. The question was not whether a student should have three years of instruction in mechanical dentistry. That was settled long ago, and formed part of the curriculum of all the Bodies. The candidate must produce "a certificate, of having had instruction in mechanical dentistry during three years by a registered practitioner." That had been sanctioned by the Council, and they had no need to re-affirm it. The point in question was *when* this three years of mechanical instruction had to be taken—whether before or after registration, or partly before and partly after. What was suggested in the motion was that the three years, or any part of it might be taken by the student either before or after his registration as a student, but with the proviso that no year of such mechanical instruction should be counted as one of the four years of professional study unless taken after registration.

Mr. SIMON asked whether Mr. Turner's intention would not be more accurately rendered by the words "Instruction in mechanical

dentistry taken before the preliminary examination shall not count as professional study?"

MR. TURNER :—No ; that does not entirely cover it. I submit that this motion entirely covers the whole question, and therefore I shall not withdraw it.

REV. DR. HAUGHTON :—There is some mystery about dentistry in every direction. I cannot understand it.

DR. LYONS' amendment was then put and lost, only one hand being held up in favour of it.

The original motion was then put and carried.

SIR WM. GULL said that before moving "That any or all of the qualifications in schedule A of the Medical Act be registrable in the Dentists' Register," he should like to say a word of explanation. On the previous day he had considered it his duty to lay before the Council his thoughts as to the propriety of making the Council an administrative body in respect to midwives. Considering that he served with Mr. Simon on a former Committee, that they were not represented on the present Committee, and that there was no registration of the views of the minority, it seemed to him, and he believed Mr. Simon agreed, that they had the right, as Crown nominees, if they thought it desirable, to lay before the Government, more or less privately, their entire views about this question apart from the Council. He intimated this intention, so that, if afterwards it should appear to the Council that they had taken such a step, it should not be said that they had done so without informing the Council. Considering the future of this Council, or its probable future, and considering the great interests of the profession which were involved in the matter, the conviction on his mind, and that of Mr. Simon, was that they would not be doing their duty to the Government if they did not take an opportunity of fully laying before it their objections to the resolutions of the Council.

DR. QUAIN said he was one of the Crown nominees, and he did not, on this point, agree with Sir Wm. Gull. He hoped Sir Wm. Gull would be especially careful to speak in his own individual capacity, and not on behalf of the Crown nominees generally.

SIR WM. GULL :—We should not speak in any other names than our own. We may not think it desirable to take any steps, and we should not do so without duly informing our colleagues. We now come to a matter which was discussed in this Council a year ago, viz., whether the Dentists' Register should contain any other

qualifications than dental qualifications. It will be in the recollection of the Council that Mr. Bowen advised that this Council could not, or should not, enter on the Dentists' Register any qualifications other than dental qualifications. Now I must be allowed to demur to that, because if you look to the Dentists' Act, section 11, sub-section 6, you will see that we have entire power to do this. That section runs thus—"The General Council may, if they think fit, from time to time make, and, when made, revoke and vary, orders for the registration in, on payment of the fee fixed, and orders for the removal from the Dentists' Register, of any additional diploma, membership, degree, letter, or license held by persons registered thereon, which appear to the Council to be granted after examination by any of the medical bodies in respect of a higher degree of knowledge than is required to obtain a certificate of fitness to practise under the Act." Mr. Bowen said that these diplomas, memberships, degrees, licenses, or letters must have relation to dental surgery; but, if you read the Act further, you see that that could not have been the case, because it says "to be granted after examination by any of the medical authorities." Now, the College of Physicians and the University of London are medical authorities, but medical authorities not having anything to do with dental surgery. I think that answers the question. We can register degrees, diplomas, licenses, or letters that have nothing to do with dental surgery, provided they indicate a higher degree of knowledge. It does not say a higher degree of knowledge in dental surgery, but it includes the degrees, diplomas and licenses of all medical authorities, so that we have the power of registering in the Dentists' Register all the diplomas, degrees, licenses, or letters granted by the medical authorities. I think, therefore, notwithstanding the opinion which Mr. Bowen has given, that we have the power. Having the power, I think we ought to exercise it on two grounds; first, *pro bono publico*, because I think it is very desirable that the public, when they look at the Dentists' Register, should see the full status of the people who practise dentistry; and secondly, because it will tend to encourage the people who register to attain a higher degree of education, and thus raise the level of the dentists' profession. On those grounds I venture to suggest that it will be for the good both of the public and of the profession if we allow the dentists to register their additional qualifications.

Dr. STORRAR seconded the motion.

Rev. Dr. HAUGHTON :—If Dr. Storrar had not seconded the motion I should have done so myself. In speaking to high-class dentists, I have found that the sore point with them has been that the Council has not permitted an additional column for these additional qualifications to be added to the Register. If their desire in that respect had been acceded to there would have been no objections raised by them with regard to the class of persons who have been placed on an apparent equality with them. They naturally want the public to be able to recognize the high position which many of them occupy. Many of them are graduates of Universities, and they are dissatisfied that it does not appear on the Register whether they are merely dentists, or something more. By a recent decision of the Council the surgical qualifications recited in schedule A of the Medical Act were permitted to be entered on the Dentists' Register. That was a step in the right direction. I think the dentists who have higher titles are entitled to differentiate themselves from the barbers and others on the list. I support entirely and completely Sir Wm. Gull's motion. I withdrew a resolution which I had put on the notice paper about the action of the Council in registering dentists being at variance with Mr. Charles Bowen's opinion, in the hope that Sir Wm. Gull's resolution would be carried. I think it is very desirable if barbers and sham apothecaries have got on the Register that good men should be allowed to put their higher qualifications on the list. I think the strong feeling that there is in the dental profession will be satisfied if Sir Wm. Gull's motion is carried.

Dr. QUAIN :—I have a word to say about the dentists, and I earnestly hope that this will be the last time that the dentists' question will be brought before us. We have had more trouble in the last two or three years with the dentists than we have had during the whole of the twenty years since I have been a member of the Medical Council. Twice we have been summoned here to meet specially about it. Four times already we have altered the Register, and this will be the fifth change we have made in it. Why? Because we have not adhered to the law. I am not going to oppose Sir Wm. Gull, but I shall not vote for his motion, because it will be utterly inconsistent in my opinion to vote against the advice seriously given by our own legal adviser, who says he is of opinion that section 11, sub-section 6, only gives power to register higher qualifications in dentistry, and that the knowledge referred

to in the clause appears to him to be confined to knowledge in dentistry. Sir Wm. Gull has said it is higher knowledge generally. Within the last half hour we have been voting for three years' mechanical instruction in dentistry. I would infinitely prefer a dentist who had spent three years in the mechanical practice of dentistry than a graduate of any University who had not spent that time. In all probability a Master of Arts or a Doctor of Medicine would be just as likely to be a bad dentist as a good one. I pointed out the difficulty to a legal gentleman, and he said, "Oh, Sir Wm. Gull is only going to show the absurdity of the whole thing." Sir Wm. Gull said that licentiates of the College of Physicians and graduates of the University of London could not register their surgical qualifications. Both these bodies have a perfect right to confer surgical licenses; there is no difficulty about that. Last year the Registrar appealed to the President, by whom the matter was referred to this Council, to know whether he was to register the diploma of the College of Physicians. But I am going a little deeper into the question. I believe this Council is creating a most dangerous class, viz., a class of partially educated medical and surgical practitioners. That is what is staring us in the face. I will not trouble the Council by repeating the arguments again, but recently, at a meeting of the Odontological Society, there was a discussion as to how far the dentists should undertake the constitutional treatment of disease. There was a long discussion upon what was the best treatment for neuralgia. Some of the eminent dentists said, "You are going into the constitutional treatment of disease; that ought to be left to the medical profession." But others said, "Oh no; we are quite qualified to deal with that." Then a dentist removes a tumour from the jaw, and he says, on being questioned about it, "I don't see any objection to it." I do not object to these licenses or degrees being put on the Register; they will constitute a very small minority of those who are on. Might I ask what is the proportion of those who have added licenses or degrees to their dental qualifications to the whole body of registered dentists?

Mr. MILLER :—I could not say exactly; it is a small number.

Dr. QUAIN : There are about 60 to 5,000, I believe. What will be the result of that? Those gentlemen who are on the Register with the licenses of the Colleges of Physicians and Surgeons will find that those who have not got those qualifications will be their rivals, and they will find that there is nothing to prevent these

others from treating patients for diseases of a medical and surgical character. These men will compete with the higher class men, and undertake the constitutional treatment of disease. I say we have blindly created a class of partially educated practitioners which will in the future give enormous trouble. We ought to have guarded against it by a clear definition of what dentistry meant. That will be the result of our proceedings—to create a class of people who will think themselves fully competent to treat disease constitutionally in every sense of the word.

Mr. MILLER :—Turning to my tabulated data on p. 24 of this year's Dentists' Register, I find that there were at the end of last year 58 dentists registered with the surgical qualifications to which reference has been made.

Dr. QUAIN :—If we are aiming at giving the public, as Sir Wm Gull said, the advantage of being able to distinguish those dentists possessing a higher knowledge, I would say that we are not doing it thoroughly, because they cannot register the highest foreign diplomas. Surely that is so; because the highest foreign diplomas would not come within the motion. A man might be a graduate of the highest foreign University, but he could not put his degree on the Register, and that is a great injustice to him. He has a legal qualification to practise dentistry, but he cannot register his higher qualifications. From first to last the Dentists' Act has been the source of infinite trouble, and I believe that it is likely to do very little good for either the dentists or the public.

Mr. TURNER :—I have an amendment first of all to suggest for Sir Wm. Gull's consideration. I agree with him generally, but I cannot go quite so far as he proposes, because I have a difficulty with reference to bodies like the Apothecaries' Society. According to Sir Wm. Gull's motion I apprehend it would cover registration of the L. S. A. I have a difficulty about that, because I do not think that could be read altogether as a qualification which represents a higher degree of knowledge. I have doubts about that. At this present time we have the power of registering surgical qualifications such as fellowships and memberships of a college and degrees in surgery, but it does not go quite far enough for Sir Wm. Gull. I would suggest this amendment, because, if it were approved of, it would remove my difficulty as regards the Apothecaries' Society. "That any or all of the qualifications in schedule A of the Medical Act granted by any of the medical authorities who have power to hold examinations for testing the fitness of persons to practise den-

tistry or dental surgery, and to grant certificates of such fitness, shall be registerable in the Dentists' Register." I mean those who have power to do it, including those who have the power but do not use it. That will cover the University degrees.

Dr. QUAIN :—How does that cover the University degree?

Mr. TURNER :—I will refer you to the 18th section of the Act. The wording of my amendment, in fact, is largely taken from that section.

Sir WM. GULL :—That will not do, because we have discussed here whether dentists do not require to know more than surgery, and whether medical knowledge was not as valuable in dentistry as mere mechanical knowledge.

Mr. TURNER :—The difficulty with regard to the Apothecaries' Society and the others is this—that they are not surgical examining bodies.

Sir WM. GULL :—No ; but they are a medical examining body. The family practitioner is essentially a man who treats medical ailments.

Mr. TURNER :—With regard to these medical authorities who confer these medical degrees, licenses, or letters, as stated in section 11, sub-section 6, of the Dentists Act, it seems to me that it is contemplated that they should have some relation to the subject of dental surgery.

Sir WM. GULL :—Not necessarily.

Mr. TURNER :—That is one of the difficulties in this Act arising from the obscurity in which the meaning is very often left. The point is this—that, whereas Sir Wm. Gull's motion is entirely an open motion to embrace everybody, this amendment, which I am more or less suggesting for consideration, is not quite so open ; it only takes in those bodies which have power to hold examinations for testing the fitness of persons to practise dentistry or dental surgery, and to grant certificates of such fitness. I will just formulate that and move it as an amendment for discussion.

Mr. MACNAMARA :—That would not satisfy me at all, nor do I think it would take us to where Sir Wm. Gull would wish to guide us, and where I think we should be willing to follow. I should like to take the Council back to sub-section 6 of section 11—"The General Council may, if they think fit, from time to time make, and, when made, revoke and vary, orders for the registration in, on payment of the fee fixed by the orders, and the removal from the Dentists' Register of any additional diplomas, memberships, de

degrees, licenses, or letters held by a person registered therein, which appear to the Council to be granted after examination by any of the medical authorities in respect of a higher degree of knowledge than is required to obtain a certificate of fitness under this Act." That is "any of the medical authorities," without any special limitation. Then, subsequently, in section 18, the conferring of degrees in dentistry is strictly limited to Bodies capable of giving surgical qualifications. So that I may read that which was quoted so accurately by Sir Wm. Gull:—"Any medical authorities," &c.—as meaning the medical authorities generally who may confer qualifications, and that if those qualifications show a higher degree of fitness in the opinion of the Council, they are capable of being inserted on the Register. A great deal has been said about Lord Justice Bowen's opinion, but after all I think educated men ought to be able to interpret the English language, and I would not pin my faith altogether to what would fall from a lawyer, when it was diametrically opposed to my own common sense. With regard to the question of the L. S. A., to which Professor Turner has alluded, I say that any dentist who is on this Register, and who subsequently goes to the Apothecaries' Halls of England or Ireland, will get an additional and higher degree of information than he possessed when he was qualified to get on this Register; Dr. Quain has alluded to the fact that the English College of Physicians has the power of conferring surgical licences; I do not know that the College of Physicians in Ireland is entitled to give a surgical licence, yet I look on the licentiateship of the College of Physicians of Ireland as representing a higher degree of education than would be conferred from the fact of a man having passed an examination in dental surgery, and I am very proud to hold this opinion, inasmuch as I have the honour of holding the degree myself, obtained after examination. After all, what should be our aim? Is it not to raise in every way that we can the status of the dental profession, and make dentists a more respectable body of practitioners? And, unquestionably, though Dr. Quain says he would prefer going to a man who had not had any medical or surgical examination, for the purpose of treating his teeth, I have seen so much misfortune fall upon patients who have gone to those purely mechanical dentists—I have seen cases where so much injury has been inflicted on patients from ignorance of medicine and surgery, that I would wish to encourage as much as possible dentists in obtaining an additional qualification, which they

would be encouraged to do by the knowledge of the fact that that additional qualification would be registered here, and from which they would be discouraged if they were able to say to themselves, "What good is this or that qualification that I have studied to get, and spent so much money in getting, when it will not appear afterwards on the Register?" It has been said, "Oh yes, it will appear on the Medical Register." Yes, true ; but if a man wants to consult a dentist he does not go to the Post Office Directory, nor does he go to the Medical Register to look for a qualified man—he goes to the Dentists' Register, and when he sees a man with such qualifications as many of our dentists have—Fellowships of the Royal College of Surgeons (Ireland), not mere Licentiates—when he sees some of them with M.D. after their names, he knows that he has found an educated man, and the probability is that, in virtue of the education, he is a more responsible and respectable man, and one in whom the public would be entitled to place more confidence. I am very much pleased at the motion which has been brought forward by Sir Wm. Gull, and all I trust is that he will not on any account—no matter from what quarter the suggestion comes—allow it to be emasculated.

Dr. LYONS : I wish to say one word in regard to the amendment proposed by Professor Turner, which has the effect of limiting the class of colleges whose qualifications it would be possible to put on the Dentists' Register. It appears to me that sub-section 6 of section 11, is in a sense mandatory. It is one of those cases in which "may" must be read to mean "must." "The General Council *may*, if they think fit, from time to time make orders," &c., &c. [Reads the clause.] Now, in that case, the term "medical authorities may" seems to have been used in a general sense ; but you will find on looking at the Act that the term "medical authorities" is strictly defined. If you turn to the very first page of the Act you will find it clearly laid down in clause 2 that the term "medical authorities" means Bodies and Universities who choose the members for the Medical Council. That seems to define as clearly and accurately as is possible what the "medical authorities" in sub-section 6, of clause 11, are, and it appears to me that we have almost no option under the clause. As to clause 18, and the restricted interpretation which, in Professor Turner's view, that seems to bear, you must bear in mind that this is not the clause dealing with registration at all—it defines the way in which the Act is to be carried out. It very properly does not give to all

medical authorities the power of conferring diplomas on dentists, but it restricts the power to those who deal with subjects cognate with dentistry, as, for instance, those Bodies who are competent to conduct surgical examinations. That clause is a clause providing for examination; it has nothing to do with registration. Taking the interpretation of the term "medical authorities," as given in clause 2, I do not think on a common sense reading of it there can be the slightest doubt that this, if not actually compulsory, is the next thing to mandatory upon us by the use of the term "may," which, in a case like this, means "shall"—*shall* "register those higher degrees, licenses" and so forth "which appear to the Council to be granted after examination by any of the medical authorities." That clause is widely drawn for the purpose of including any qualification which may be given afterwards on examination; but, if any medical authorities chose to give qualifications without examination, such qualification would not be registrable. I am one of those who regret that this Act in certain of its clauses was not drawn in a more stringent way, and I go very much indeed with Dr. Quain in the expression of regret that it has been found possible under this Act to register persons who pursue other than a strictly professional calling. That is a lamentable condition of things. It is one of those things to which we ought to direct our attention with the view to have it cured in the future. But we have been informed on authority that we should not neglect, that we must register those persons, whether painters or glaziers, or whatever they are, who, in the eye of the law, practise dentistry and have qualifications. That I regret; but it is not because one regrets that a certain class of men have got in through a back door into a professional body, that we are justified in neglecting another portion of the Act which is clearly mandatory, or hesitate as to what we ought to do in another and a better cause. The very fact that we feel compelled to obey the mandatory Act in regard to these persons is the best argument for enforcing the terms of those clauses which enable us to do, and, as I contend, almost compel us to do, that which is a good thing in itself. In regard to the policy of the Act, I should say it is extremely likely that this very clause was contemplated with the view of marking out and classifying those persons who had a superior kind of education, and who occupy a superior scientific and professional position as compared with those who, in the general contemplation of the Act, must be admitted; and with the view of obviating the prac

tical difficulty of distinguishing between a person of the highest education and a person of the lowest education—between a person of the highest professional character and standard, and a person who makes use of the colour of a professional qualification to earn money, and, at the same time, pursues a trade or occupation of some kind. I consider that under the Act we have no option; and I think any one with a superior qualification demanding to be registered could compel us under *mandamus* to register his qualification. I think also the policy is so desirable that it is only right and proper that we should do what we are empowered to do by the Act. That we are empowered to do it by the Act there cannot be a question by any candid mind that reads the Act and applies it to the conditions before us. Therefore I gladly support Sir Wm. Gull on this motion; but, at the same time, I go strongly with Dr. Quain, and if ever the opportunity arises I shall certainly be very happy to lend any assistance I can in another place to remedy the Act, so as to exclude those persons who are mere tradesmen in one sense, and who come in under the shelter of a loosely drawn Act, and pursue a calling which belongs to other persons.

Dr. BANKS :—I shall not say one word on the legal aspects of this case. I have not the experience of my friend Dr. Lyons with Acts of Parliament. I merely rise to give Sir Wm. Gull's motion my most hearty support. I know the highly educated "gentlemen" class and I know the low class in this so-called profession. Now I would ask the Council to pass this resolution of Sir Wm. Gull's chiefly because I think it is an act of common justice to the educated gentlemen among the dentists. I have not been convinced by Dr. Quain's argument. I believe that a man being a graduate of a University is no reason why he should not be a good dentist as well. I think there is a strong reason why in his dealings with the public he should be influenced by feelings of a better order than would probably actuate the man who is, so to speak, a tradesman. I think we owe it, then, to those gentlemen who have secured a higher grade in their profession to provide the means of distinguishing between the high-class dentists and the man who follows his calling as an ordinary trade.

Mr. SIMON :—It appears to me that I must support Sir Wm. Gull's motion on the ground that what he actually proposes to do follows almost of necessity upon what the Council has already done. And if that were all I should vote for it; yet I cannot vote for it, because, in the face of the legal opinion we received, I

believe we had no right to do what we did. I know there are some gentlemen round this table who are inclined to act upon the old saying, "In for a penny, in for a pound." That may be the view of the majority of the Council, and I don't mean to say there is nothing to be said in favour of that view. It does not appear to me that what Sir Wm. Gull proposes is at all inconsistent with what we voted before; in fact, it rather appears to follow from it. But that was voted against the written opinion of counsel and against the advice of our Solicitor then sitting on the right of the chair. Against that, on the motion of my friend Dr. Storrar, the resolution upon which the Council has since acted, was carried. But the resolution restricted it to surgical authorities, and if there had been no legal difficulty in the matter I should have said, "But why restrict it to surgical authorities? If all sorts of medical knowledge, and knowledge in which medical authorities examine, is to be counted, count midwifery, count pharmacy, count any of the subjects in which examinations are held, but certainly count medicine, seeing that if all truly medical knowledge is to be taken into account in your Dentists' Register it may be of importance to the public that the dentists shall have the kind of education that physicians possess in addition to that which dentists have." I should have been quite prepared to admit that, except that I found we were advised by our legal advisers that "knowledge" in the clause which has been referred to means dentistic knowledge, and that certainly was my reading of it. I knew the history of the clause, and I knew that was the intention of the words, whatever their legal meaning might be. I knew quite well, and there are others here who knew, that the intention of the clause was to give the authorities who should examine in dentistry power to examine in higher subjects relating to the teeth, and to confer higher qualifications.

DR. STORRAR:—I do not know how Mr. Simon learned that that was the intention.

MR. SIMON:—I saw the clause drawn myself, and I know that to have been the intention. Whether that was the intention of the gentlemen of whom Dr. Storrar is thinking I cannot say, but at all events we were informed that such was the legal meaning of the words, and in the face of that the Council inserted the surgical qualifications on the Register. Well, if we insert surgical qualifications I see no reason why we should not, as Sir Wm. Gull proposes, insert medical qualifications also. I cannot vote for it because I

feel myself entirely debarred by the legal opinion of our advisers, and I will not vote on this Council against legal opinions given to the Council. But, as I said, on the principle of "In for a penny, in for a pound," if any gentlemen around me like to be illegal, let him that was illegal be illegal still.

DR. AQUILLA SMITH :—I think there is not a great deal of difference between Sir Wm. Gull's motion and Mr. Turner's amendment. The principle of admitting additional qualifications into the Register is already established. But I think the main objection to Sir Wm. Gull's motion is that it contains the words, "all medical authorities." That would allow a dentist to place on the Register his license in midwifery, if he had one from the Royal College of Surgeons of England. I do think Professor Turner's motion limits the qualification to what I think is a proper limit and more consonant with the legal opinion of Lord Justice Bowen. I have no objection at all to a dentist adding his qualifications with the restriction which Professor Turner proposes, and I think it is important to the public, because the Register, we all know, is encumbered with a great many names the public have no confidence in, and we know that they ought not to have been there. Dr. Lyons spoke of a large number getting in by the back door, but he appears to have forgotten that the back door has now been shut, and the barbers and hairdressers can no longer get in. Dr. Lyons also spoke of sub-section 6 of section 11, being mandatory on the Council, because, he says, "may" means "shall"; but I find the words are—"The Council may if they think fit." Now that must prevent it from being mandatory, and clearly proves that the clause is permissive. It was only the other day in the case of Mr. Murdoch* that we exercised the privilege conferred by those very words, "if they shall think fit," and refrained from striking his name off the Medical Register. Therefore, if the words are permissive in the one case, they must be taken to be permissive in the other. I shall support Professor Turner's amendment, because I think it does everything that is wanted. The great advantage is that this Register being encumbered with so many questionable names, the addition of surgical qualifications from Bodies entitled to confer them is quite sufficient, and would be a great advantage to the public, because they will say at once, "This man is not only a dentist, but he has got a good qualification," and they will thus be able to distinguish the high-class professional men from those who have got in at the back door. I look

upon that as being a most important thing. Dr. Quain said some thing about the necessity of dentists being qualified for constitutional treatment. I do not think it would be worth while to introduce medical qualifications purely upon that view. I take it that a gentleman who obtains a licence as dentist from the Royal College of Surgeons, would, from the education he has received as a surgeon, be fully qualified to conduct any constitutional treatment connected with dentistry. I have much pleasure in supporting Professor Turner's amendment.

Prof. HUMPHRY:—My position is precisely that of Mr. Simon. I thought it extraordinary on the part of the Council to act in the teeth of the only legal opinion they had, such legal opinion being to the effect that the power of the Council was simply to register degrees in dentistry. But, as Mr. Simon said, one may as well be hung for a sheep as for a lamb, and I quite admit that, having departed from what I conceive to be our legal position, we may as well go on. At the same time I shall not vote for it; I shall not vote at all, because I think the whole thing is an illegal transaction. We have taken our lawyer's opinion, and we have taken our counsel's opinion, and they were both distinct upon the point, that this clause does not give us the power to register other than dental qualifications; and, nevertheless, in spite of that we did it, for some good reason, I suppose, and, having done it, I think we may as well go on. With regard to Dr. Lyons' idea of its being compulsory I cannot consent to that for a moment, first, because the clause says, "*May, if they think fit;*" and, secondly, the words are, "any additional diplomas which *appear to the Council* to be granted," and so forth. So that it is clear there is nothing compulsory. It is evident the Council may do as it likes; indeed, if Dr. Lyon's view be correct, this Council must insert every degree in theology which a dentist may hold.

Dr. LYONS:—Allow me to remind Professor Humphry that medical authorities do not grant theological degrees.

Prof. HUMPHRY:—Yes, they do. The University of Cambridge is a medical authority, and I think you will not deny that the University of Cambridge confers degrees in theology. And if Dr. Lyons' view is correct this Council is bound to register theological degrees conferred by the University of Cambridge.

Dr. LYONS:—It says "of fitness."

Prof. HUMPHRY:—Fitness in what? Does it mean fitness in dentistry then?

Dr. LYONS :—Yes.

Prof. HUMPHRY :—Then that is entirely my view—it ought to be confined to dentistry. If you open the door the Council must register degrees in theology, but that does not really follow upon Sir Wm. Gull's motion. His motion is limited, and I confess that taking that view I would support it in preference to Professor Turner's amendment, for I do not see any reason for excluding any one of the Bodies, because clearly, under the view the Council has taken, the diploma of the Society of Apothecaries or any other of the Bodies is "a higher degree of knowledge." We have simply substituted the word "additional" for "higher." The Act says "a higher degree of knowledge."

Dr. PITMAN :—Professor Turner's amendment is strictly limited to the registration of surgical qualifications. Sir Wm. Gull's motion would add medical qualifications. Dr. Lyons has endeavoured to interpret the Act of Parliament, but he has omitted in my opinion one very important clause which would assist us in coming to a conclusion as to what are the different qualifications of a higher degree of fitness. Now I think one clause of an Act of Parliament will very often interpret another, and if you look at clause 3 of the Dentists' Act it says this—not that a person who holds a medical qualification can with that qualification get upon this Dentists' Register, because this is simply a Register of practising dentists—but it says, in order to show what higher qualifications are, that a person who holds a medical qualification may put "dentist" on his door, and may act as a dentist although he cannot get put on the Dentists' Register. The clause says, "From and after the first day of August, 1879, a person shall not be entitled to take or use the name or title of 'dentist,' either alone or in combination with any other word or words, or of 'dental practitioner,' or any name, title, addition, or description implying that he registered under this Act, or that he is a person specially qualified to practice dentistry, unless he is registered under this Act." Then what comes after is this :—"Any person, who, after the first day of August, 1879, not being registered under this Act, takes or uses any such name, title, addition, or description as aforesaid, shall be liable, on summary conviction, to a fine not exceeding twenty pounds; provided that nothing in this section shall apply to legally qualified medical practitioners." Thus a legally qualified medical practitioner, though not upon the Register, may call himself a dentist, and may practise dentistry, and that to my mind interprets the subsequent clause

of the Act, and shews what was intended by the term "higher qualification." It is needless to go further than that, but if you look to the Register itself, page 49, you will see "Frederick Canton, Licentiate in Dentistry of the Royal College of Surgeons of England, 1875;" after which comes, as "additional qualifications,"—"Member of the Royal College of Surgeons, England, 1871, and Licentiate of the Royal College of Physicians, London, 1872. Well, it is not necessary to notice all the instances of licentiates of the College of Physicians having registered their title. Whether it is right or wrong is another question. But there it is; and why should not licentiates of other Colleges have their qualifications registered as well. I would go with Sir Wm. Gull, but in his motion he has not carried out what he purposes, because, although we wish to enable every registered dentist to put every additional qualification which proves a higher degree of knowledge on the Register, we do not want a medical qualification alone to give him a right to be put on the Register. But Sir Wm. Gull proposes that "any and all of the qualifications in schedule A of the Medical Act be registrable in the Dental Register." So that anybody that comes with the Apothecaries' Hall licence and says, "I claim to be put on the Dentists' Register," would be entitled to claim registration.

Sir WM. GULL :—I propose to insert the word "additional."

Dr. PITMAN :—"Be registrable by registered dentists on the Register." I think some words to that effect should be inserted to prevent a man getting on the Dentists' Register without any dental qualification.

Dr. STORRAR :—As the seconder of Sir Wm. Gull's motion I should like to say a word. His motion is simply the latter half of a motion made by me last year. I cut it in two, and confined my motion then to surgery in order to meet the views of Professor Turner. I wanted something done in this direction, and if I could not get all I was willing to take a part. In the course of the discussion Professor Turner rather came to see the case as I did, but, inasmuch as the debate had gone on upon my amended motion, I was content to leave the division to be taken on the admissibility of surgical qualifications. Sir Wm. Gull then gave notice that at the next meeting (this meeting), he would bring forward a motion for the admission of medical qualifications, and I seconded that as a matter of course, because that was my original idea. I should like to say a word in

deprecation of the tone in which Dr. Lyons has addressed himself to this subject. I think it is rather hard that he should have thrown a taunt at the dentists that they are tradesmen—that they are in some degree so ignoble that they ought not to be associated with the medical profession.

Dr. LYONS :—I rise to a point of order. I beg leave to disclaim any such intention whatever. In what I said I merely referred to that class of persons who were pursuing a trade, as has been shewn by cases here, and who also practise dentistry. I utterly disclaim any intention of regarding, except with the warmest interest and the highest respect, the general profession of dentistry.

Dr. STORRAR :—I am very glad to hear Dr. Lyons' explanation ; probably, from my defect of hearing, I did not catch accurately what he said. What I feel is this, that after all, with all the "motley crew" that we have upon this list, there are dentists and dentists. I am happy to say that there are gentlemen practising dentistry with whom I consider it an honour to be associated, not only socially, but as men of high scientific attainments. It is a misfortune attributable to a slip made by the Executive Committee that this "motley crew" were introduced into this Register at all. I am not going to revive the discussion upon that. The only remedy for it is to permit those men to die out. After all we must bear in mind that surgeons and other professional men must not ride the high horse upon this subject, forgetting that there was a time when they were associated with persons of very humble calling. Surgeons were formerly barbers ; apothecaries were formerly grocers ; and our business therefore is to educate the dentist of the present day up to the level of a professional man, up to the level that the educated dentist now wants and asks for. That I hold to be our duty. As to the legal question we had enough of that last year—I leave that to Mr. Simon, he is more apt at this matter than I am.

Mr. SIMON :—You mean in obeying the law as laid down in legal opinions.

Dr. STORRAR :—No ; I simply do not agree with you. But I am not going to enter into the points of difference and agreement. I want to say a word about something which has fallen from Dr. Quain. He begins by saying he does not care a bit about it. He is prepared to consent to this vote, but still he wants to have a Parthian shot at the dentists.

Dr. QUAIN :—I said nothing of the kind.

Dr. STORRAR :—I did not interfere with Dr. Quain when he was addressing the Council. Dr. Quain certainly did take a Partisan shot at the dentists and at their Act, and said all that he could bring up in his mind against them. I have simply to say that the Dentists Act is our Act. It is the Act of this Council. The dentists drew the Bill in the first instance. We had it incorporated in the Medical Amendment Bill. We made certain alterations in it, and afterwards, when the Medical Bill was found to be not in a position to pass, the dentists' clauses were detached, and constituted into the Dentists' Act which was passed. Let me, if you please, just read one sentence only which is recorded in the Minutes of this Council under date 1st July, 1878, vol. 15, page 120. It is signed H. Jenkins, the Government draftsman.—“Office of Parliamentary Council, Queen Anne's Gate, Westminster.—Dear Dr. Acland,—The amendments which are about to be made in the Dental Practitioners' Bill in the House of Lords are proposed by the Government for the purpose of bringing the Bill into conformity with the Government Medical Bill, so as to place dentists in the same position as they would be in if the Government Bill had passed with the dentists' clause in it—the principles of which have been approved by the General Medical Council.” Now to what extent the Government fulfilled this intention, as represented by Mr. Jenkins, I am not prepared to say, but it is perfectly clear from this letter that the object of the Government of the day, and of their agent, Mr. Jenkins, was to make this Dentists' Act precisely what it was when it passed this Council. I think, therefore, it is not fair to be throwing dirt at the bad construction of the Dentists' Act, or at any other fault that the Act may have, either in its words or in its intention, because any such reflection is really a reflection upon this Council. Dentists tell me, and they ought to know what they are about, that many of the objections which are now held by this Council to certain clauses in the Dentists' Act would not have arisen at all if the Bill in its original draft had become law instead of the draft of this Council. I do not say that the Act is perfect. The dentists themselves, I dare say, would be the first to admit that it has imperfections ; but what I say is that we have been a party to this legislation, and it is our duty now, fairly and honestly, and with a feeling of professional sympathy and friendship to the dentists, to carry this Act out.

Dr. QUAIN :—In justice to this Council I cannot help reading five lines from the Minutes of July 14th, 1878. On that occa-

sion it was moved by Dr. Quain, seconded by Dr. Pitman and agreed to, that "with reference to the Lord President's Bill, entitled 'The Medical Act Amendment Bill,' as ordered by the House of Commons to be printed, the Council desires to express its wish that the Bill entitled 'The Dental Practitioners Bill,' be brought into conformity with the Dental Clauses in our present Bill." That was not adopted. The whole force of our Amendment was to place it in the hands of an independent Board, but that was not adopted.

Dr. STORRAR :—That is just what I said. The Government said they would not follow our suggestions. It is not our fault.

Sir Wm. GULL :—I should like to say one word in reply. First to my friend Mr. Simon ; if we have to carry out an Act of Parliament we may take the advice of counsel no doubt, but if on fuller discussion of the matter we are convinced that we ought to act contrary to counsel's advice, I hold that we are bound to do so. He gives us his advice and we find that it is not such as we can, as professional men and men of the world, follow. Then the Act of Parliament gives us legal power, for it says that we may do so and so, "if we shall think fit." That leaves liberty of action. Therefore I cannot quite agree with Dr. Lyons in the view he takes of that matter. Then to make my friend Professor Turner more satisfied it is clear that the words are these "any medical authorities." Therefore you may register qualifications given by medical authorities who have no sort of relation to Dental surgery. I quote the case of the London College of Physicians as an instance. Then with regard to the words "higher knowledge ;" no doubt the family practitioner, who has to treat most of the diseases of the children and the family, has higher knowledge than the family dentist. Therefore I must say the Apothecaries Societies' diplomas have a right to be registered, because they certify a higher degree of knowledge. I do hope that the motion I have brought forward will be carried unanimously.

Prof. TURNER :—I do not wish to press the amendment, and so with your permission I will withdraw it. I thought it worth while to bring the matter forward in that form, but as it is not likely to meet with acceptance I will ask permission to withdraw it.

The PRESIDENT :—The motion is: "That any or all of the qualifications in Schedule A of the Medical Act be registrable by registered Dentists in the Dentists' Register." Professor Turner

asks leave to withdraw his amendment, and if it is the wish of the Council will be withdrawn.

The amendment being withdrawn, the motion was put to the vote and carried *nem. con.*

The Registrar then read the following Memorial from the Representative Board of the British Dental Association :—

"The Representative Board of the British Dental Association, anxious that the standard of Dental Education, whereof the MEDICAL COUNCIL are the appointed guardians, should be maintained at a high and uniform level throughout the United Kingdom, beg respectfully to direct the attention of the GENERAL MEDICAL COUNCIL to the completion of the time during which, in accordance with the terms of the COUNCIL'S *Minutes* (July 16, 1879), examinations should be conducted *sine curriculo* by the Royal College of Surgeons in Ireland.

"In the opinion of the Board the time has now arrived when exceptional examinations should be altogether discontinued by all the Licensing Bodies in favour of strict uniformity of educational test, already adopted by one or two, otherwise the value of the Licentiate-ship will be greatly deteriorated as a guarantee of professional competence.

"We venture to remind the COUNCIL that, by Section 22 of the *Dentists' Act*, they have the power to supervise these examinations ; and we would suggest that this power might now with real public advantage be exercised.

"We have the honour to be your obedient servants,

"JOHN TOMES,	THOMAS A. ROGERS,
EDWIN SAUNDERS,	THOMAS UNDERWOOD,
JAMES PARKINSON,	JAMES SMITH TURNER, <i>Hon. Sec. B.D.A.</i>
"Members of the Business Committee.	

"British Dental Association,

"40, Leicester Square, London, W.C.

"March 7, 1882."

No motion on this communication having been made by any of the Council, the Registrar next proceeded to read the following complaint from a registered dentist, which had been referred to the Council by the Executive Committee :—

"130, Lancaster Road, Notting Hill,

"June 8th, 1882.

DEAR SIR,—I have been requested by one or two of my colleagues to inform you that, at 199, Portobello Road, Notting Hill, there is a man evading the provisions of the *Dentists' Act* (1878), by announcing himself as a 'Dentist,' and practising as one, but *using*

no name. Are you disposed, in the interests of the profession, to take up this case?

"W. J. C. MILLER,
"SECRETARY of the MEDICAL COUNCIL"

"Yours truly,
"BARNARD LEE.

The PRESIDENT inquired whether any member of the Executive Committee wished to make any remark upon this communication.

Mr. SIMON suggested that it should be answered in the negative.

The PRESIDENT: I will take the opportunity of observing concerning various communications of this kind, that they come to the office sometimes during the sittings of the Executive Committee, but, generally speaking, during the intervals; and it is a question requiring some discretion as to how the Committee shall act. Sometimes we think they are of such a nature that it is evident that the Council should not interfere in any way; sometimes we think it as well that the Council should have examples, at all events, of the kind of applications which are perpetually being made to us. The Council should know that the number of these is really at times very great. They consist of various kinds of letters and communications, some of which it is not desirable to publish.

The REGISTRAR: The following complaint by a registered dentist is a type of such letters as the President has referred to:—

"Modwena House, Burton-on-Trent.

"May 25th, 1882.

"GENTLEMEN,—I beg respectfully to call the attention of the MEDICAL COUNCIL to the fact that a late pupil of mine, who was articled to me for three years (but I was glad to give him his indentures, May 6th, 1882, six months before his time expired), T. L. CALLENDER, who not being qualified, has commenced practice in Burton-on-Trent. I enclose his advertisement, with copy of C. J. FOX's letter to me, it being, I think, a case for the MEDICAL COUNCIL to take in hand. His age will be twenty. There is no Mr. GODDING here.

"I remain, Gentlemen,

"Yours respectfully,

"J. W. SADLER."

With this was enclosed a letter from Mr. J. C. Fox, dated September 12th, 1879, saying that T. L. Callender had been with him for six months as an assistant in the workroom, and that he had found him "steady, honest, and industrious," and the following advertisement cut from the *Burton Evening Gazette*.

MR. T. L. CALLENDER,

*Late with C. J. FOX, Esq., M.R.C.S., L.D.S., R.C.S.E.,
(DENTAL SURGEON),*

AND

MR. GODDING, M.R.C.S.,

SURGEON DENTIST,

BEG to inform the public of Burton that they have commenced practice at Warwick House, Bridge St., where they may be consulted daily, from 10 a.m. to 5 p.m.

Operations performed in a thoroughly scientific manner.

All the latest improvements, including the American mode of "stopping" with non-cohesive gold.
WARWICK HOUSE, BRIDGE STREET.

Mr. SIMON suggested that it would be perhaps convenient for the Council simply to write on the back of these communications *nil*. It was the custom in public offices, whenever it was not considered desirable to take any action in a matter.

Dr. PITMAN: That will not do, because in this case the British Dental Association asks us to prosecute this man.

The REGISTRAR then read the following letter from the British Dental Association:—

"40, Leicester Square,

June 27, 1882.

"GENTLEMEN,—I have been directed by the Business Committee of the British Dental Association to ask for permission to prosecute Mr. T. L. CALLENDER, of Bridge House, Burton-on-Trent, and Mr. GODDING, representing himself as a Member of the Royal College of Surgeons, whose proper address is not at present known to the Committee, but who is supposed to be Mr. J. R. GODDING, of 67, Oakley Square, London,* for infringing the *Dentists' Act*.

"The Committee also respectfully ask the COUNCIL to consider the propriety of granting to the Representative Board of the British Dental Association, or to the Honorary Secretary of the Association, the power to take up any case which may arise in the intervals between the sittings of the COUNCIL; and, if it be within the powers of the COUNCIL, to grant at its present sitting this concession to the Representative Board.

"I remain, gentlemen,

"Your obedient servant,

JAMES SMITH TURNER,

"To the GENERAL MEDICAL COUNCIL. *Hon. Sec. B.D.A.*"

* The information we received appeared fully to warrant us in making this qualified statement, but we do not vouch for its accuracy. We have offered to publish a disclaimer from the gentleman referred to, who is, we understand, a relative of Mr. Callender's.

Mr. SIMON : There is a distinction between the two cases. The first case, in which we are written to by a man saying, "Are you disposed, in the interests of the profession, to take up this case?" being really a case in which the answer to be returned is evidently, "The matter having been brought before the Council, the Council does not think fit to give any directions therein."

Dr. LYONS : Or does not see any grounds for taking action.

Mr. SIMON : No ; that is not the way to do it—"Does not give any directions." There must be a great many cases like these where, in a public office, the word *nil* would be written on the letter, and that would be the answer.

Dr. PITMAN : I would point out that the duty seems to be conferred upon us of taking charge of these offences, because the Act says, "Prosecution for any of the above offences shall not be instituted by a private person, save with the consent of the General Medical Council or of a Branch Council."

Mr. SIMON :—That remark applies to the next case.

Dr. PITMAN :—It may apply to all cases which are offences against the Act, because the Act goes on to say, "but may be instituted by the General Council, or by a Branch Council." Now it is clear to my mind that the intention of the Act of Parliament was to place in the hands of the Council the power, and to lay upon it the duty, to prosecute all such persons. The question then is are we to let off all these men who we know, or believe, are committing offences, are we to allow them all to escape, and say we will take no action against them? Your attention has been drawn to the fact that these are offences against the Act, and the Act of Parliament gives to the Council, or the Branch Council power to prosecute.

Mr. SIMON :—You misunderstand my point. Mr. Barnard Lee's letter was passed over by the Council, and we are now on the case of Mr. Callender. The question that I raised was as to the form of answer to be sent in those cases in which the Council did not think fit to interfere, should it not be "that the Council gives no directions in the matter?" I am not saying whether that is or is not the right course to take, but I am asking what sort of answer we should return.

Sir WM. GULL :—With regard to the two last cases, I will propose a motion.

Dr. MACNAMARA :—I understood that the communication from Mr. Barnard Lee was passed over for the purpose of being considered along with the others.

The PRESIDENT :—No ; I asked if there was any motion thereupon, or whether the Executive Committee had any observation to make, and I received no reply. These letters are simply acknowledged by the Registrar unless any special instructions are required. And, as I said before, I am very glad that the serious attention of the Council should be given to these cases, because they are constantly arising, and these are but examples of them. Some seem to be irrelevant, some to be trifling ; but on the other hand others may be very serious, and I am pretty sure from the course of proceedings in the business office, that we shall have shortly, unless these cases subside, to establish a regular course of action in regard to them. Looking at the thing as a question of administration, it is not convenient or desirable that we should allow these matters to hang over for twelve months ; and some other way of dealing with them must be found. The practice of the Registrar is that where it is probable there will be a question of law involved, he takes the opinion of our solicitor, and if there is nothing to be done it would be unreasonable to trouble the Council with the matter, but if it is a doubtful case then it must come before the Council in some form. Therefore I hope that the Council will consider these two last cases in relation to one another, and give instructions to the Registrar or the Executive Committee what course to pursue in such cases.

Mr. MACNAMARA :—I did not understand that the letter of Mr. Barnard Lee had been disposed of.

The PRESIDENT :—That was disposed of and passed by the Council without comment.

Sir WM. GULL :—I have to move in respect to the two last cases, and especially in reference to the letter from the British Dental Association, that this Council grant to Mr. James Smith Turner, the Honorary Secretary of the British Dental Association, power to take up the case of Mr. Callender.

Dr. QUAIN :—The letter asks a great deal more than that.

Sir WM. GULL :—I know it does, but it is not what we are prepared to grant. We can only give permission in individual cases.

Professor TURNER pointed out that the Association asked for permission to prosecute both Mr. Godding and Mr. Callender.

The motion was carried unanimously.

Dr. STORRAR pointed out that the Council was returning no answer to the other part of the letter in which the Association

asked not only the power to prosecute these two men, but a general power to prosecute. He would not propose to grant them the power, but he desired the Council to take note that it had been asked for.

Dr. AQUILLA SMITH, referring to the cases which were brought before the Executive Committee, asked whether it might not be advisable for the Council to consider whether power should be given to the Executive Committee to take action in certain cases that might come before them without reference to the General Medical Council.

The PRESIDENT said that was a matter which could only be considered upon notice of motion being given.

Dr. AQUILLA SMITH then proceeded to move the ordinary complimentary motions with which the Council is accustomed to close its proceedings, including a well-merited vote of thanks to the Registrar for his able and assiduous discharge of the complicated duties of the Council's office.

The usual statement of the Receipts and Expenditure of the Dental Registration Fund during the year 1881, was laid before the Council by the Finance Committee. It compares favourably with that published last year, the receipts being larger, and the expenditure less; there was still, however, an excess of expenditure over income amounting to £450. We shall give the statement in full next month.

ANNOTATIONS.

By an oversight, the reporters being excluded at the time it was passed, the exact terms of the decision of the Medical Council with regard to Mr. Mallan's case were not given in the report of the proceedings which appeared in our last number. The resolution, which was moved by Dr. QUAIN, and seconded by Dr. AQUILLA SMITH, was as follows:—"That the Council, having considered the Report of the Dental Committee on the facts of the case of Mr. V. C. Mallan, are of opinion that the practice brought under the notice of the Council is one which is inconsistent with the law and with professional propriety; but the Council, if it receive the assurance of Mr. Mallan that the practice shall be discontinued, will not think it necessary to take further steps in the present case."

As the proceedings taken in this case were not in any way promoted by us, we can neither take credit to ourselves for their success or be blamed for failure. For this reason we feel the more at liberty to comment on the results obtained, and must emphatically express our dissent from the assertion of a contemporary that "the first prosecution under the Dentists' Act has terminated in an utter collapse; it has not solved a single one of the knotty points with which the act bristles from end to end." We may state, first of all, with regard to the police prosecution, that the report of the adjourned hearing on July 5th, which appeared in the daily papers, was necessarily incomplete, and, to some extent, misleading. The MS. verbatim report of the proceedings which we obtained extends over twelve pages of foolscap, and would probably occupy seven or eight pages of this JOURNAL. It is true that the actual infliction of a penalty was evaded by a technical plea, but we do not regret this fact. In the first place it was the *first* prosecution under the Act with regard to the legality of a practice which had hitherto been followed with impunity, and there was much force in Mr. Mallan's plea, that he had only adopted obscure aliases, whereas it is well known that practices have been carried on under such names as Rogers, Cartwright, and Parkinson, by persons who could have no right whatever thus to designate themselves. A very decided opinion has, however, now been expressed both by the Medical Council and by the magistrate that to practise under an assumed name is illegal. With this decision before them, subsequent offenders will have no excuse to offer, and, if the case is proved against them, will, unless we are greatly mistaken, be at once struck off the Register. If we meet with no worse failures than this in our own legal encounters we shall have good reason to be satisfied.

In spite of our best endeavours to secure an accurate report of the dental business of the Medical Council, our attention has been called to a few errors. Perhaps the most important of these is the omission already referred to. We are also informed on good authority that Dr. Quain did not make use of the expression which we commented on in our leader last month. Instead of asserting that what the Association "wanted was not to do justice to the poor people who earned livings by doing other things besides practising dentistry," he gave it as his opinion that what the Association wanted "*would not do justice*" to this class. This, though less

offensive to ourselves, is almost as far removed from a fair statement of the question as was our reporter's version. But, in this matter, arguments, and even facts, seem lost upon Dr. Quain, so we will content ourselves with making this not unimportant correction.

At page 322, the name "Hammond" should be "Hamilton." This was a *lapsus linguae* on the part of the President. The "opinion" referred to at page 327, appeared in the JOURNAL for August 1st last, page 371, and the "explanatory resolution," also referred to in Mr. Turner's letter, was simply a request from the Business Committee of our Association that the Council would place on their Minutes this opinion, together with those of Mr. Justice Bowen and Mr. G.A. R. FitzGerald, which were read before the Council in July, 1880, and expressed a hope "that, in the presence of a great preponderance of high legal opinion in favour of a correction of the Dentists' Register, the Council would restore to the Register the recently erased descriptive terms 'with medicine, pharmacy,' &c., and would, at its convenience, proceed to the correction of the Register by the erasure of names registered in the midst of doubt, or take such other steps as may lead to the production of a Register legally correct."

THIS, we believe, concludes the list of our sins both of omission and commission. We may add that, in view of the probability that we have not yet heard the last of these debates, and the value, for purposes of reference, of an authentic record of these important proceedings, it is proposed to republish our reports, carefully corrected, in a separate form. They will form a neat octavo pamphlet of 73 pages.

THE following are the names of the successful candidates at the dental examinations of the Royal College of Surgeons of Edinburgh, which took place last month:—Messrs. Francis Bromley, of Hampstead, W. J. Mason, of Chard, Somerset, and Frank H. Briggs, of Leeds, passed the first examination; and Messrs. David Monroe, of Edinburgh, and George J. Lucas, of Blackheath, passed the final examination, and were admitted Licentiates in Dental Surgery.

WE have been requested to bring before our readers the sad

case of Mrs. Ashenhurst, whose husband was at the time of his death acting as assistant to Mr. George Weaver, L.D.S.Eng., of Upper Baker Street, Regent's Park, who gives him an excellent character. The widow was left entirely without means and with five children, the eldest being eleven, dependent upon her. Subscription lists have been opened by Messrs. Ash, the Dental Manufacturing Company, Messrs. Rutterford, Messrs. Jamieson, and by the Editor of the *British Journal of Dental Science*, with the hope of starting Mrs. Ashenhurst in some retail business. The Rev. E. A. Midwinter, of Blandford Square, London, N.W., is the treasurer of the fund.

WE hear that Mr. S. J. Hutchinson, the Curator of the Odontological Society's Museum, is preparing a paper, to be read before the Society in the course of next session, giving the results of a critical examination of the large collection of skulls recently added to the Museum of the Royal College of Surgeons.

ONLY those who have actually experienced it can fully realize the amount of work necessary for the successful organisation of a Branch Meeting. The amount of correspondence which it involves with authors of papers, members generally, instrument makers, &c., is very considerable, whilst the number of details to be personally attended to is still more harrassing. We are not surprised, therefore, that as soon as the meeting is over, the overworked members of the executive should all at once feel the immediate need of relaxation, and should rush off in various directions like boys let loose from school. We do not in the least grudge them their well-earned holiday, but we trust that in future executive officers will not consider their duties quite at an end until they have supplied us with the materials necessary to enable us to give an accurate report of their proceedings. Forgetfulness in this respect on the part of those connected with the late meeting at Cheltenham has given us a good deal of trouble, and has considerably delayed the issue of this number of the *Journal*. For the report we publish we are largely indebted to the enterprise of the *Cheltenham Chronicle*. The Report of the Council only reached us on the evening of the 11th, and the subjoined statement of the result of the ballot only arrived on the 14th, when the *Journal* had been made up for press:—

President of Western Counties Branch: R. Rogers, Esq., L.D.S.I.

President-Elect: Charles Gaine, Esq., M.R.C.S.

Vice-Presidents: Messrs. T. Cook Parson, M.R.C.S.; George Parkinson, L.D.S.Eng.; and Spence Bate, F.R.S., L.D.S.Eng.

Treasurer: J. T. Browne-Mason, L.D.S.Eng.

Secretary: W. V. Moore, L.D.S.Eng.

Council: Messrs. J. Balkwill, Watson, Fox, Pearman, C. Parson, McAdam, and H. Mallett.

THE death of a servant girl from the incautious use of tincture of aconite given her by a dentist to use as a local application to relieve the pain of periostitis, is reported from Brooklyn, New York. The dentist stated at the inquest that he told the patient to "tip the bottle on her finger, and then rub it on the gum;" this she seems to have done frequently during the day. The girl obtained the tincture on Thursday, was taken ill next day, got worse on Saturday, and died on Sunday morning, the cause of her illness not being suspected till it was too late: the dentist was censured for his want of judgment. The case affords an instructive lesson.

APPOINTMENTS.

MR. CHAS. S. PASMORE, L.D.S.I., has been appointed Hon. Dental Surgeon to the Swansea Provident Dispensary.

MR. C. STOKES, L.D.S.I., has been appointed Hon. Dental Surgeon to the Sheffield and South Yorkshire Ear and Throat Hospital.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

156 Members are reminded that their Subscriptions for the current year are still unpaid, and that some of them owe for last year as well.

A good deal of trouble and delay would be avoided if Correspondents would pay more attention to the notices which appear at the end of each number. All correspondence for the Editor, contributions for the Journal, books for review and exchange Journals, should be addressed to 40, Leicester Square, London, W.C.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

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VOL. III.

The Late Meeting at Liverpool.

THE Report of the Annual General Meeting of the Association, which we publish in the present number, needs but little from us in the way of comment ; it tells its own story of the steady progress of the institution. And it may surely be said that the steadfastness of purpose and unswerving loyalty to the cause entrusted to them which have been exhibited by the Executive have been such as fully to deserve success, even when this has not been completely attained.

As regards the majority of its undertakings, victory has flowed steadily in favour of the Association, but recently it has sustained a check. During its last session, the Medical Council refused to do that which, as we think, it is both bound in honour and entitled by law to do—viz., to purge the Dental Register of certain names which, but for the gelatinous policy of the Council, would never have been entered thereon.

It cannot be too often pointed out that, in thus seeking to correct the Dental Register, the Association has in no way sought to inflict injustice on any one, and in no instance has it acted as an aggressor. It has simply endeavoured to protect the public and professional interests which were confided to it, and to repel those who sought to secure, and who, we fear, have in a measure succeeded in securing for themselves, a position for which they had never worked, and to which they were in no wise entitled—a position which has enabled them to impose themselves upon the public as that which they are not, and, by so doing, to injure the community at large, and to depreciate the value of the Dental Register in the opinion both of the public and of the profession.

It is not wonderful that the apologists of professional ignorance should take up with undesirable allies, and Dr. Quain, who has made himself conspicuous by his passionate advocacy of the cause of the pretentious and untaught, may yet find that his apparent triumph has brought about a distrust in the proceedings of a body of distinguished and honourable men, who, under an imperfect knowledge of the dental registration question, accepted his statements and followed his leading. In justification of these remarks, we refer our readers to the admirable address of the retiring President.

It is on the other hand satisfactory to see that, as has been stated in a previous number, the Association has made more secure the right of the Dental Licentiate to his true professional title, and also that the Medical Council has not refused to acknowledge and to register such additional medical qualifications as registered dental practitioners may possess.

From the reports of the Secretary and Treasurer we gather that the Members of the Association are increasing in number, and that its funds are in a satisfactory condition,

but this last must we fear be ascribed rather to careful expenditure and to the large amount of voluntary labour bestowed on the management of the affairs of the Association than to any other cause, since the Treasurer states that there are no less than 156 subscriptions unpaid. This, in a society of little over 500 members, is a monstrous deficiency, and furnishes a startling comment on the words of the retiring President—"Our greatest enemy is apathy in our own ranks."

But if the profession at large be apathetic, this cannot be said of many members of the Association for, as will be seen when the large amount of matter at our disposal is published, the papers read during the two days meeting at Liverpool were at once wide in their scope and elevated in their tone. Thanks to the energy and foresight of the Hon. Sec. of the Reception Committee, the Annual Dinner was a great success, and the presence of the Mayor of Liverpool and of as many of the leading medical practitioners as were not absent on their autumn holiday, shows that the importance of the British Dental Association is being recognised both in professional and in commercial circles.

Disclaimer.

WITH reference to the letter dated the 27th June, 1882, addressed by Mr. Smith Turner, Hon. Secretary of the British Dental Association to the General Medical Council, and which appeared in our last month's Report of the meeting of that body, Mr. Smith Turner wishes to express his great regret for having (misled by the advertisement of Mr. T. L. Callender, and relying on information which has since been found incorrect) stated that the Mr. Godding mentioned in the advertisement was supposed to be Mr. J. R. Godding, of No. 67, Oakley Square, London, and to apologise to Mr. J. R. Godding, of that address, for having done so.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting.

THE Second Annual General Meeting of the British Dental Association took place at Liverpool, on Friday and Saturday the 25th and 26th ult., in the rooms of the Medical Institute, Mount Pleasant, which had been kindly placed at the disposal of the Association by the Liverpool Medical Society.

On the 25th, the Representative Board met in the Council Room at 9.30 a.m., and at 11 a.m. the Members generally assembled in the large room of the Institute for the Business Meeting.

In the absence of the President, the chair was occupied by the Vice-President, Mr. Thomas Underwood, who was assisted by Mr. Campion, President-elect, Mr. J. S. Turner, Hon. Sec., Mr. W. H. Waite, of Liverpool, Local Sec., Mr. James Parkinson, the Hon. Treasurer, and about a hundred members, including the following :—

Ashworth, Henry, Radcliffe.

Beavis, George, Newport, Mon.
Biggs, J. A., Glasgow.
Blandy, Henry, Nottingham.
Bonnalie, George, Chester.
Brownlie, J. R., Glasgow.
Brunton, George, Leeds.
Buckley, T., Hollinwood.
Budd, John, Birkenhead.

Canton, F., London.
Carmichael, J. W., Barrow-in-Furness.
Capon, R. M., Liverpool.
Cockings, W. S., Louth.
Coffin, C. R., London.
Coleman, A., London.
Coles, J. Oakley, London.
Connell, E. A., Liverpool.
Crappier, J. S., Hanley.
Crowther, G. H., Wakefield.
Cunningham, G. M., Cambridge.

Dilcock, S., Liverpool.
Dopson, D., ditto.
Durward, J. S., Edinburgh.
Dykes, Thomas, Dumfries.
Dykes, William, Manchester.

Ewbank, F., London.

Fernald, H. P., Cheltenham.
Fraser, S., Liverpool.
Frost, G., Manchester.

Gaddes, Thomas, London.
Gaskell, W. F., Liverpool.
Glaisby, Walter, York.
Geekie, W., Oxford.
Gregory, E. J., Cheltenham.

Harding, W. E., Shrewsbury.
Helyar, H., Haverfordwest.
Holland, J., London.
Holford, W. T., London.

Johnson, M., Chester.

King, A., Worcester.
King, T. E., York.
Kyan, J. H., Preston.

Ladmore, E. J., Leeds.
Lee, William, Northwich.
Lloyd, J. W., Liverpool.

Macleod, W. B., Edinburgh.
Mahonie, T., Sheffield.

BRITISH DENTAL ASSOCIATION.

Matheson, L., Manchester.
Murphy, T., Bolton.

Newman, W. J., Liverpool.

O'Duffy, J., Dublin.

Penfold, W., London.

Quinby, H. C., Liverpool.

Renshaw, I., Rochdale.
Roberts, J. G., Liverpool.
Rogers, A., Cambridge.
Rogers, Claude, London.
Rogers, R., Cheltenham.
Rose, Fred., Liverpool.
Routledge, William, Newcastle-on-Tyne.
Rymer, S. L., Croydon.

Sewill, H., London.
Shillinglaw, W., Birkenhead.
Smale, A. M., London.
Stewart, C. T., Liverpool.

Stewart, R. E., ditto
Stokes, C., Sheffield.
Story, J. C., Hull.

Tanner, T., Manchester.
Teece, H., Millington.
Tomes, C. S., London.
Trippier, Thomas, Liverpool.

Vanderpant, F. J., Kingston-on-Thames.
Vasey, C., London.

Walker, Dr. J., London.
Weiss, F., ditto.
West, C., ditto.
White, R., Norwich.
Williams, E. H., Manchester.
Wilson, J. A., Bangor.
Wood, J., Dumfries.
Wood, W. R., Brighton.
Woodhouse, A. J., London.
Woodhouse, R. A., ditto
Wormald, D. A., Bury.
Wormald, S., Stockport.

The CHAIRMAN, in opening the proceedings, said he was sorry to say that their excellent President was unable to be present owing to the illness of his brother. Mr. Tomes begged him to say that he had looked forward to this meeting—the second annual meeting of the Association, and the first one held out of London—with a great deal of pleasure, and very much regretted his inability to attend it. He (the Chairman) also very much regretted that, as Vice-President, he had been obliged to take the place of one so infinitely better able to discharge the duties of the office—one whose whole system, he might say, was so thoroughly saturated with dental politics and the interests of the profession—and he must throw himself on the kindness of the meeting in his endeavours to discharge to the best of his ability the onerous duties which devolved upon the retiring President, in introducing his successor. He would now call upon the Treasurer to read his report.

Mr. JAMES PARKINSON (the Hon. Treasurer) reported that the subscriptions due on the 1st December last, when the number of Members was 492, numbered 124, those of 29 Members having been owing for two years. The balance at the bank was £311 18s. 6d.; the cash at interest was £150; and the arrears

he had calculated at £160 13s. ; making a total of £622 11s. 6d. There might be a trifle more in the Secretary's hands ; but he thought they might take about £630 as the balance in hand, minus the subscriptions in arrear.

The CHAIRMAN said he thought that, whilst the meeting would consider that, under the circumstances, the report was very satisfactory, their opinion would be the same as that of the Representative Board—that Members should be more punctual in the payment of their subscriptions. He would now call upon the Honorary Secretary to read his report.

Mr. J. SMITH TURNER read the report as follows :—

“Mr. CHAIRMAN and GENTLEMEN : The principal events connected with the history of our Association have been from time to time faithfully reported in our JOURNAL, and the bearings of the action of the Representative Board and Business Committee will be clearly set forth in the address of our esteemed President. As a consequence the Secretary's report need not be either long or exhaustive.

“Although the Association was established by the unanimous vote of a meeting of dentists held in Willis' Rooms, London, on the 3rd day of March, 1879, when the expiring Dental Reform Committee was resuscitated under the title of ‘The Representative Board of the British Dental Association,’ the gentlemen thus entrusted with the task of giving the Association a corporate existence in addition to that of a mere name, found that many circumstances, which may either be called difficulties, or the ordinary impediments which have to be surmounted in the formation of any Association intended to have more than an ephemeral existence, were such as could only be overcome by a long process of steady work, and that beyond a given point no extra energy, however honestly applied, could push the matter forward.

“The functions delegated to the Association were, in a certain sense, of a belligerent nature, and thus power conferred on rash or injudicious persons, or even to the wisest and most cautious amongst us, might by a very slight error lead to every Member of the Association being saddled with an amount of responsibility never contemplated by any of those who had voted for its formation.

“Then, again, it was clearly seen by the Representative Board that the journal which had the largest circulation in our profession was daily becoming more and more antagonistic to the principles which

had been adopted by the Association, and that unless we could establish an organ which could, irrespective of any commercial consideration, advocate our views, we could not expect to have that influence as an Association which it was and is our aim to possess.

"Here, then, were three obstacles to our progress—First, the danger of unlimited responsibility incurred by rash Members of the Association. Second, the danger which always attends the publication of any periodical, more particularly when its functions are more or less of a political character. And third, the pecuniary responsibility attached to those who might be willing to form a guarantee fund for the support of any periodical such as the Association might possess.

"With such contingencies before them, the most enthusiastic of our supporters paused in their advances, while the more timid became more reserved, and the indifferent discovered a good excuse for their continued indifference.

"The reasonable scruples of the first two classes have been successfully overcome; whilst the third, or indifferent class, has proved the most difficult of all. But I trust that even this class will in the future diminish even more rapidly than it has been doing, until it entirely disappears.

"The method adopted by the Representative Board to protect the Members of the Association from any liability beyond their annual subscriptions was to enrol ourselves as an incorporated body under the Companies' Act of 1867. Now, any one who has had the smallest experience in drawing up a set of bye-laws, either for one of our Branch Associations, or for a local cricket club, and those who have had the further experience of the extraordinary difficulty of meeting every contingency by the provisions of bye-laws, however carefully framed, may form some conception of the task set before the Representative Board when it had to organise our Association so as to be what we desired, and still be fit for registration by the Board of Trade.

"For, be it noted, that our Memorandum and Articles of Association, although appearing innocent enough in the copy of our laws, are hard and fast conditions which admit of no modification or variation, however much such changes may appear desirable.

"Fortunately we had a President whose mental qualities eminently fitted him for the task of framing our constitution. Moreover he had the time which it was absolutely necessary to devote to such

an undertaking, and his position in the scientific world enabled him to secure help and advice from the most desirable sources; and with the generous advice of Mr. Fowke, the Secretary of the British Medical Association, he was enabled to frame the Memorandum and Articles of Association, and also to enable the Representative Board to form such a set of bye-laws as was, with a few modifications, accepted by the Board of Trade. This incorporation of the British Dental Association was accomplished in June, 1880, and it was not until this had been settled that the Representative Board could appeal to the profession for the support to which it is most undoubtedly entitled.

"Up till recently, our place of abode had been nominal, but at the commencement of the present year an arrangement was entered into with the Committee of Management of the Dental Hospital of London whereby we enjoy the necessary accommodation for our business meetings and other matters at the very modest expenditure of ten guineas per annum.

"During the current year, the Representative Board has voted a yearly sum of £50 for the services of a Secretary to the Association, and it is with much pleasure that I can report that in Mr. J. F. Pink we have secured the services of a gentleman who will become more and more useful to the Association as he becomes more familiar with his duties.

"As may be seen from the Journal we have during the past year been busy with the Medical Council, and have also taken advantage of the sittings of the Royal Commission on the Medical Acts to make known our wants, and to defend the position which we have attained. The evidence of our President before the Commission will be published as soon as the Blue Book comes to hand, as will, also, the evidence of the president of another association, and our readers will thus be able to form an opinion of their relative value.

"The numerous fresh cases of infringement of the Dentists' Act, which are continually being brought before the Business Committee, as also the infringement of the rules of the Association, have so far been met by moral force, and although lawyers' letters are not unknown in this business, we, on our side, have been hitherto able to accomplish our ends without any such extraneous aid. Now that the Medical Council has left us to our own devices, we shall, I hope, be able to attend more diligently to all such cases, and if some have been allowed to slip, I trust that

those gentlemen who have brought them under the notice of the Association will pardon what must seem carelessness to them, but what is in reality physical and mental inability on the part of the Honorary Secretary to encompass all that is required of him.

"With a view to enabling the Business Committee to take prompt action in cases of infringement of the Dentists' Act, a memorial was sent to the Medical Council asking permission to take action in any case which might arise during the intervals of the Branch Council's meetings, but to this no reply was given by the Council.

"In the case of Mr. T. L. Callender, of Burton, the Association, in the name of the Hon. Secretary, has received power to take action. As I have not yet been able to meet our solicitor, I am unable to report any addition to this statement.

"Since the publication of our list of Members in January, we have added 30 new names and there have been four resignations; at present we stand on the verge of a roll of 500, the strict number, as nearly as I can state it, being 498.

"The publication of our Journal has been of much service to the Association. Besides the issue to our Members, it has necessarily a large gratuitous circulation, rendered necessary by the importance of keeping our views and aspirations before the proper authorities, and by our endeavour to make a position for it in the professional literature of the day. The Publication Committee and the Association at large owe a deep debt of gratitude to Messrs. Walker and Coleman for the energetic and careful manner in which they have piloted the Journal through the first stages of its existence, and we trust that these gentlemen may see the results of their generous exertions in the growth of a healthy and vigorous professional periodical, second to none in literary excellence and usefulness.

"The suggestions of the Representative Board with regard to its retiring Members will be laid before you, and it will be your duty to select those who are willing to serve another term of office, or to find such substitutes as are willing to fill their place.

"The locality of our next Annual Meeting will also have to be considered, and, in connection with this, the choice of the President-elect for the ensuing year."

The CHAIRMAN said he was sure the members of the Association would agree with him that the report of their excellent and most hard-working Secretary was most satisfactory, and it was not

necessary for him to say that in Mr. Smith Turner they had an officer who, whatever sacrifices he had to make, had never shirked his duty. The next business was to elect a Treasurer for the ensuing year. The office was vacated by Mr. Parkinson, whom all who had been in the habit of seeing his mode of keeping the accounts knew to be one of the best of Treasurers, and, if they would take his advice, they would re-elect him.

On the motion of Mr. WOODHOUSE, seconded by Mr. ROGERS, Mr. James Parkinson was unanimously re-elected Treasurer for the ensuing year.

The CHAIRMAN said that, by the laws of the Association, ten Members of the Representative Board must retire every year, and the retiring Members this year were:—Messrs. J. Tomes, G. A. Ibbetson, C. Vasey, and H. Moon (London), C. Sims (Birmingham), J. R. Brownlie (Glasgow), J. O'Duffy and G. S. Longford (Dublin), J. E. Manton (Wakefield), and W. Campbell (Dundee). All these gentlemen were eligible, and they all offered themselves for re-election excepting Mr. Moon, who was prevented doing so by ill-health. The Representative Board suggested that Mr. Frederick Canton, of London, should be elected in the place of Mr. Moon, who was one of the London representatives. Mr. Canton was a man of great energy, and he thought they would be fortunate if they secured his services on the Representative Board.

Mr. RYMER said he felt pleasure in proposing the re-election of the nine gentlemen who offered themselves, and the election of Mr. Canton in the place of Mr. Moon, whose retirement on account of ill-health he was sure they would all regret. As he had said, he had great pleasure in making this proposal, but at the same time he did not think that the principle of re-electing gentlemen perpetually was at all a good one. He thought they should have an infusion of new blood from time to time. They found this worked with the best possible effect in other societies. In the case, however, of a young institution merging into active, vigorous life, he thought it was a good thing that gentlemen who had had experience in its bringing up, as it were, should continue their work for a time.

Mr. WEISS seconded the motion, and, the voting papers having been collected, the gentlemen nominated were declared unanimously elected.

Mr. CRAPPER (Hanley) said that, as an outsider, he had signed

each of the papers, and the names were those of gentlemen whom they were all proud to honour, and who, they hoped, would long continue to represent them. At the same time, it was just possible that some of the provincial Members of the Board might not attend the meetings as regularly as they might do, and he thought that, as a guidance to Members, it was desirable that in future a statement of the attendances should be given.

The CHAIRMAN said the next question they had to settle was where the next annual meeting of the Association should be held, and the view of the Representative Board was that, seeing that the Western Branch was the earliest founded of all the branches of the Association, it would be a compliment to it if the annual meeting next year were held at Plymouth, the desire of the Association being that the great centres with which the Branch Associations were connected should each of them be visited at these annual meetings. If there were any dissentient from the suggestion of the Representative Board, any one who had any other place to propose, he should be pleased to hear his proposition.

Mr. CANTON proposed, and Mr. COLEMAN seconded, the adoption of the suggestion of the Representative Board, and it was unanimously resolved that the next meeting be held at Plymouth.

It was also resolved, on the motion of Mr. ROGERS (Cheltenham), seconded by Mr. DILCOCK (Liverpool), that the days of the meeting be the 24th and 25th August next.

The CHAIRMAN said that Plymouth having been selected as the place of meeting, he thought the Members of the Association would agree with the Representative Board that there was one gentleman in Plymouth who was pre-eminently qualified to be the President elect for the ensuing year. He meant Mr. CHARLES SPENCE BATE, F.R.S. Would some gentleman be good enough to propose that Mr. BATE be the President elect.

The proposition was moved by Mr. VANDERPANT (Kingston), seconded by Mr. WOOD (Brighton), and carried unanimously.

Mr. SMITH TURNER (the Hon. Sec.), said they now required a Vice-President, and he thought it was important that they should, if possible, have a gentleman resident in London. Their present Vice-President was also Vice-President of the Representative Board, and to him as Secretary it had been a great advantage to have Mr. Underwood filling both offices, because he had considerable knowledge of the business of the Association, and his

advice and co-operation could be readily secured in any matter of difficulty. The President of the Representative Board was not in a very good state of health, and he resided out of town, consequently it was a great advantage that the Vice-President should be in town and get-at-able by the Secretary. It was also desirable that the Vice-President of the Association should be in the same position, and, considering the advantages the Association had derived from the services of Mr. UNDERWOOD, he must be excused for saying that he had a special interest in wishing him to be re-elected. He therefore begged to propose that Mr. THOMAS UNDERWOOD be re-elected Vice-President of the British Dental Association.

Mr. WHITE (Norwich), seconded the proposition, which was carried by acclamation.

The CHAIRMAN : It is now my duty to read to you the valedictory address of our late President. He gives in it a clear and succinct account of the proceedings of the past year, and points out the position in which this Association now stands before the country at large.

On the Proceedings of the Past Year (1881-2) in regard to the Registration of Dentists.

BY J. TOMES, F.R.S., THE RETIRING PRESIDENT.

IN vacating an office in the discharge of whose duties high responsibilities have been involved, it is of some importance that a clear statement of the relevant professional events of the years lately past should be made, in order that the Association and its President for the coming year may have a distinct and concise view of those past proceedings, which must, of necessity, influence its action in the immediate future. This casting back is rendered necessary, on account of the many incorrect statements made, and the course subsequently, and, perhaps, consequently taken by the Medical Council at its late session (July, 1882), in respect to the administration of the registration-clauses of the Dentists Act ; a course which this Association, seeking as it does, equitable, as opposed to a timid or mere technical administration, was not prepared to expect.

I ask for a little indulgence in the narrative of events, reaching back to 1878, for I shall fail to make the present position understood, unless I recur to the consecutive steps by which this position

has been brought about. But the retrospect shall be limited to the occurrences that directly bear upon the question which will occupy the attention of the Association. To this end free use must be made of the Medical Council's Minutes, which I may remind the Association are published and sold, so that all acts therein related, are fair subjects for wise and just criticism.

Shortly after the passing of the Dentists Act (July 22nd, 1878), its administration was entered upon by the Medical Council. The Executive Committee of the Council met on August 7th, 1878, and passed the following resolutions:—

(a) The Committee, having considered the *Dentists' Act* (1878), and the necessity of receiving at once the names of those who apply for registration, and having taken the opinion of Mr. OUVRY on the question, authorized the REGISTRAR to begin the preparation of a *Dentists' Register*, for the approval of the Medical Council, and to receive, in accordance with the provisions of Section XVI. of the Act, a Fee of Two Pounds from every person who applies for registration before the 1st of January, 1879, and a fee of Five Pounds from every person who applies for registration after that date.

(b) The REGISTRAR having submitted to the Executive Committee certain forms for carrying out the Registration of Dentists in conformity with the *Dentists' Act* (1878), it was

Resolved:—That the forms of registration be submitted to Mr. OUVRY for his approval.

“The whole of these papers, including a form for a ‘Dental Registration Certificate,’ were accordingly at once laid before Mr. Ouvry by the Registrar, and, with a few suggested modifications, were, thereafter, widely circulated throughout the United Kingdom, the Dental Reform Committee taking five-eighths of the first edition of 4,000 copies (on undertaking to pay for the same), and sending them to addresses previously ascertained.”*

The Registrar reported that he had, up to that date, provisionally registered 930 Dentists.

Here then we have an indisputable proof, that all the papers and forms used in connection with registration were so used with the fully expressed approval of the Council's solicitor, the late Mr. Ouvry.† Amongst these papers, thus approved by the Medical Council's legal adviser, was one requiring that the candidate for registration under sub-section (c), should declare whether

* Report by the Registrar on Dental Education. Minutes of Medical Council, for October 17th, 1878.

† The senior partner in the firm of Messrs. Farrer and Ouvry, solicitors.

he was in the *bonâ fide* practice of dentistry "separately or in conjunction with medicine, surgery or pharmacy."

On October 17th, 1878, the Council considered in detail the form of the Dentists' Register, and the form was then determined, subject to the approval of counsel, upon the single point whether or not a distinct column should be set apart for the entry of medical and surgical diplomas as additional and higher qualifications.

At the same meeting the following resolution was passed :—
"That the names of those to whom Certificates of Registration have been issued by the General Registrar be entered by him in the Dentists' Register, and that the entry bear the date of such *provisional* Registration."

It was at the same time resolved :—"That the first (printed) edition of the Dentists' Register be published as soon as possible after the first day of August, 1879," this being the last day upon which unqualified practitioners could obtain registration, and after which date the Register was for ever closed to all who were without a recognised dental qualification.

On October 18th the Dental Committee of the Medical Council, under section 15 of the Act, was appointed, and the session terminated with the following resolution :—"That the Executive Committee be directed to carry out generally the provisions of the Dentists Act, in accordance with the resolutions agreed to by the Council." In fact the only details not then determined were the question of a separate column for higher qualifications, the several questions respecting dental education upon which the Executive Committee was requested to obtain information, and certain other questions respecting colonial and foreign qualifications.

The all-important Register had thus been formed, which, be it remembered, never leaves the custody of the Registrar. (See Section 11, Clause 4 of the Act.)

On the 19th of October the Executive Committee directed the Registrar to answer an inquiry to the effect that he is bound to enter in the Dentists' Register the name of any person who signs the declaration in the schedule to the Act, "and to append thereto a copy of the penal section 35 of the Act," thus casting the responsibility of registration upon the claimant coupled with a threat of punishment for fraud. It will be afterwards seen that this direction was not fully acted upon. Other particulars were still required.

At the next meeting of the Executive Committee on November 8th, 1878, steps were taken to obtain the opinion of Mr. Charles Bowen on a point upon which the Council itself was by the Act specially authorized to adjudicate, and upon which a legal practitioner, unless very intimately acquainted with all the particulars of a general medical and of a special dental education, and their mutual relations, was incompetent to form a just opinion. There is no evidence in the opinion given and inserted, without the case, in the Minutes, November 8th, 1878, that Mr. Charles Bowen had any intimate knowledge of the respective educational details. The opinion is that higher qualifications in dentistry should alone be registered, but Mr. Charles Bowen does not say that medical studies, pursued as additions to the special qualifications do not, in effect, constitute a higher knowledge of the general subjects embraced in dental surgery.

On December 11th, 1878, it is stated in the Minutes that the Registrar has entered in the Register (under clause (c) section 6), 1,403 persons who had declared themselves to have been practising dentistry separately, and 815 in conjunction with the practice of either medicine, surgery, or pharmacy. So that up to this date no doubt had been entertained as to the meaning of the section, which, under subsequent legal twisting, has since given so much trouble. Indeed a resolution was passed at the meeting on January 8th, 1879, to the effect that the grounds of claim for registration in conjunction with the practice of medicine, surgery, or pharmacy should be indicated in the Register by the respective initial letter M, S, or P. At the next following meeting (Minutes, January 31st, 1879) it was, at the request of the Dental Reform Committee, determined that the *words* themselves instead of their *initial letters* should be inserted in the Dentists' Register. The Minutes of this date (January 31st), also contain the Registrar's Report, wherein he says that he has brought the first stage of the dentists' registration to a fairly successful close. "Up to the last day of the past year when the time of registration for the lesser fee of two pounds ended, the number of persons completely registered was 4,637," which, with incomplete cases will make a total of 4,725.* As to the care with which he had conducted the business of registration, the Registrar makes the following statement :—

* The number of entries in the Register completed on August 1st, 1879, is 5,289.

"Having been apprized by the legal adviser of the Council, whose advice has been carefully sought and acted upon from first to last, that his duties in connection with the Dentists' Act were purely ministerial—to see, that is to say, that the terms of registration laid down in the Act were fully complied with,—and that he was bound to register all applicants who, on their own responsibility signed the declaration in the schedule, the Registrar has done his utmost to insure that the forms for registration under Clause (c) of Section 6 should be filled up with scrupulous accuracy; and, accordingly, these forms present, for such further investigations as may be prosecuted hereafter, a complete series of data, showing, in the attested signatures of the applicants, that they declared themselves to have been, at the date of the passing of the Act, '*bonâ fide* engaged in the practice of Dentistry, or Dental Surgery, either separately, or in conjunction with the practice of medicine, surgery, or pharmacy.'"

At the meeting of the Executive Committee on March 5th, 1879, it was resolved that the Registrar "be directed to have the Dentists' Register set in type and published as soon as possible." There was also read: "a case drawn up by Mr. Ouvry, and opinion thereon by Mr. Charles Bowen, in regard to the Dentists' Act (1878), obtained for the guidance of the Executive Committee." The nature of the opinion is not here specified, but that it was confirmatory, excepting in respect to the entry of unqualified assistants, of the course taken in registration admits of no doubt, for the President, at the meeting of the Council, March 18th, 1879, in his opening address says, "There is a class of persons now practising dentistry which will not, after the first of August, be again reckoned among English dentists. What these do now they will, up to that date continue to do. Hairdressers, perfumers, jewellers, blacksmiths, and others, have hitherto exercised the function of tooth-drawing. The law has not hitherto hindered them from doing so. If any of them, however, have fraudulently, or incorrectly obtained registration as *bonâ fide* in practice, 'either separately, or in conjunction with the practice of medicine, surgery, or pharmacy,' it will be your duty to expunge their names from the Register." This is followed by an account of the steps to be taken in order to legally effect the erasure of such names.

The President was no doubt speaking with the authority of Mr. Charles Bowen's opinion confirmatory of the general course taken in registration, fresh in his memory. The opinion has not been

published, but its details were freely spoken of, indeed the points therein embraced were from an early date quite an open secret. That the words, "the practice of medicine, surgery and pharmacy," meant the legal practice of those subjects, and that persons who combined the practice of dentistry with callings other than those mentioned in the Act were not registrable, constituted the most important points of the opinion, and it was to these unquestionably that the President alluded in his address. He acknowledged the responsibility of correcting the Register which from the course pursued in registration would of necessity require correction. The Dentists' Bill as drafted for us and as it passed the House of Commons, made it necessary that applicants should satisfy the Registrar of the justness of their claim to registration.* At the suggestion of the Medical Council the Government removed all our registration-clauses, and substituted those of the Council-approved Dental Section of the Government Medical Bill, and thereby allowed persons to register on their own representation, with a view to their subsequent removal from the Register, should their claims on investigation prove to be false or fraudulent, for which investigation a Committee is provided, the findings of which are final. In our Bill means were provided for the prevention of incorrect registration: in the Medical Council's Bill incorrect registration was allowed and means were provided for its subsequent correction.

The registration of unqualified practitioners closed on the first of August, 1879, and early in the following October copies of the Register were for the first time issued to the public. The claim under which each person was admitted to registration was therein stated. The astonishing number of 2,049 persons was entered as "In practice (with pharmacy) before July 22nd, 1878." On examining the Chemists' and Druggists' Register it was found that the names of about a fifth of the number of persons so registered were absent therefrom, and who could not, therefore, legally have practised pharmacy. They could practise only as assistants or pupils under cover of a registered practitioner who was himself responsible for their proceedings while in his employment. The opinion of counsel (Mr. G. A. R. FitzGerald), was taken as to

* Clause 7 of Bill as passed by the Commons is as follows:—"No name shall be entered in a Register under this Act except of persons authorised by this Act to be registered, nor unless a Registrar be satisfied by sufficient evidence that the person claiming is entitled to be registered," &c.

whether such persons were entitled to be registered in the Dentists' Register, and the opinion being in the negative, the names, with a copy of the case submitted and the opinion thereon, were, in the discharge of an obvious duty, sent in to the Medical Council (June 15th, 1880), with the allegation that as the persons named, not being registered as pharmacists, could not legally practise pharmacy, they therefore were not entitled to registration and should not be allowed to remain on the Dentists' Register. This was the sole point of our case, viz., that the practice of medicine, surgery and pharmacy mentioned in the Act mean the legal practice of those subjects, and that those engaged in the pursuit of any other subjects are not registrable. The whole question came before the General Council on July 15th, 1880. The cases of alleged incorrect registration sent in by the Association were referred to the Dental Committee, and "the (legal) cases relating to the Dentists' Register submitted for the opinions of Mr. Bowen and Mr. FitzGerald and their opinions thereon," were read by the Registrar to the Council "in private," and their subsequent insertion in the Minutes was negatived by a vote of 12 against 7. On the motion of Dr. Quain, the Council, in error as we think, referred the foregoing opinions to the Dental Committee; for that Committee is not empowered by the Act to go beyond the investigation of the facts of cases of questioned registration.

From the Minutes of the Dental Committee of December 17th, 1880, we learn that Mr. Ouvry attended and submitted to the Committee a statement in regard to the cases of alleged incorrect registration referred to him at the preceding meeting, (October 29th, 1880), and that "the Committee having considered Mr. Ouvry's statement, then drew up a Report on the said cases." Nothing is said as to the nature of the statement referred to, but the meeting was held on the 17th, and Sir Farrer Herschell's opinion, of which we have heard so much, is dated December 14th. There can be but little doubt that, amongst other things, the statement contained an account of this opinion, and that the report was influenced by the opinion. The General Council met on February 3rd, 1881, when the Report of the Dental Committee was read and entered in the Minutes, together with the lately obtained opinion of Sir Farrer Herschell. The allegation submitted by the Association was found by the Committee to be correct, viz., that in the vast majority of instances the names of the persons in the list sent in were not upon the Chemists' and Druggists'

Register at the time they, for the purpose of registration, declared themselves to have been in the *bonâ fide* practice of dentistry with pharmacy, before the passing of the Dentists' Act. They were found to be engaged in a calling (*i.e.*, unqualified assistantship) which is not recognized in the Act, and not being recognized, its pursuit, according to Mr. Charles Bowen and Mr. FitzGerald, barred them from registration in the Dentists' Register. This is the whole of our case. The Committee went into other questions such as the amount and character of practice done by individuals, the antecedent history of their practice, and in one or two cases the amount of dental knowledge they possessed, but with these questions we have nothing to do.

Of the legal opinions referred to the Dental Committee by the Council no notice is taken in the report, but the opinion of Sir Farrer Herschell and his juniors is appended thereto, and it amounts to a direct contradiction of the opinion given by Mr. C. Bowen and Mr. FitzGerald, and indirectly condemns the course taken by the Council under the sanction of Mr. Ouvry, in making any inquiry as to whether a person practised dentistry separately or in conjunction with either of the three specified subjects. The recognition by the Government of Mr. Bowen's great judicial powers, and his consequent elevation to the bench, seem to have produced in the mind of the Executive Committee distrust in his opinion; for the principal questions, which Mr. Justice Bowen had answered, in 1879, were asked of Sir Farrer Herschell in 1880. The President, who, at the opening of the previous meeting, reminded the members of their duty in the erasure of the names of hair-dressers, jewellers, &c., was silent, the solicitor, Mr. Ouvry, reminded the Council that it had no power to discuss the facts of the cases reported upon, and the feeling produced seemed to be that the last taken opinion must be similarly regarded. Several members objected to the course prescribed to them, and talked of the "mechanical obedience" exacted by the legal adviser, but their protest was without effect. The dictum of Sir Farrer Herschell, that the words of the Act "either separately or in conjunction with medicine, surgery, or pharmacy," are without meaning, and should in the administration of the Act be wholly disregarded was obediently accepted, and the Council passed a resolution to the effect that as we had not produced evidence showing that the persons cited on our list were not in *bonâ fide* practice as dentists, the removal of their names could

not be ordered. (Minutes for February 3rd, 1881.) In truth the resolution declined to do a thing we did not ask should be done, and altogether ignored the discussion of, and action on, the question we proposed. The acceptance, without argument, of one legal opinion, in preference to another of equal if not superior authority, each being taken by the Council itself, in reality left the question we proposed undetermined.

Under these circumstances we were advised to submit a carefully drawn case, including the opinion of Mr. FitzGerald and Sir Farrer Herschell, to the highest attainable legal authorities—to Sir John Holker, Mr. R. S. Wright (who is distinguished amongst lawyers for the value attached to his opinion upon statute law), and Mr. G. A. R. FitzGerald, the draughtsman of our Act.

The result, as you all know, was an opinion in perfect concurrence with the opinion of Mr. (now Lord Justice) Bowen, and a refutation on cited grounds of the opinion of Sir Farrer Herschell respecting the meaning of the words of the Act last quoted. This important opinion was placed by the Association at the disposal of the Medical Council, accompanied with a strongly expressed hope that the correction of the Register, the need for which was now supported by a preponderance of high legal authority, should be reconsidered and means taken, in case of doubt, to insure a judicial decision upon the point upon which a difference of opinion existed (July 16th, 1882).

The Executive Committee (Minutes, July 28th), acknowledged the receipt of our communication, and replied that it rests with us to obtain a judicial decision. We again asked that the question should be laid before the Council in full session.

At their next meeting, November 11th, 1881, the Committee resolved, "That the several documents and legal opinions in the possession of the Council having reference to registration under the Dentists' Act be placed in the hands of Mr. Farrer, the solicitor to the General Council (Mr. Ouvry's successor), for the purpose of his further advising the Committee thereon."

So far as we knew no further action was taken until the meeting of the Council on July 5th, 1882, when, after it was resolved to enter in the Minutes the communications from the Association along with others, Dr. Pitman said, "That, as there were so many new members of the Council present, perhaps it would facilitate business if Dr. Quain, who was thoroughly familiar with the dental business, would make a brief statement before Mr. Farrer gave his opinion.

Dr. Quain, who, although he accepted a highly remunerated executive office under the Act, has from the first regarded it with great and persistent hostility,* said, "I shall have great pleasure in giving a short historical outline of the proceedings of the Council with regard to this dental business." But a history given by an adverse partizan is never likely to err on the side of impartiality or of correctness, and we do not accordingly find, in this case, that Dr. Quain's version of the position furnishes an exception to the general rule. Within a few sentences of the beginning of his narrative, he says, "We did not vary the words of the schedule, but we added to it, under the advice which came from the Dental Reform Association." The Registrar, on the other hand, in a passage of his report, already quoted, stated that from first to last he had carefully sought and acted upon the advice of the legal adviser (Mr. Ouvry) of the Council, and, in his previous report, October 17, 1878, already quoted, we find that all the forms used in registration had been submitted to Mr. Ouvry, and, with a few suggested modifications, approved by him. These are sadly conflicting statements. Can we discredit the confirmed and adopted report of the Registrar, who is generally acknowledged to be strictly impartial and exceedingly exact in his statements?

Then Dr. Quain complains of letters sent out by the Association, under legal advice, suggesting that certain persons should remove their names from the Register, otherwise they would be reported to the Council. With this letter Dr. Quain had no concern, neither has the Council. The Association, incorporated for the purpose of upholding the spirit and provisions of the Dentists' Act, was perfectly within its rights in addressing letters to those who were held to have obtained registration in error. Then he tells the Council that a list of about four hundred persons was sent in, who, we contended, were liable to have their names erased from the Register; that these were submitted to Mr. Ouvry, who, at a cost of £600, investigated their cases. He goes on to say that Mr. Ouvry, being requested to advise the Council on the facts, came provided with the highest opinions he could obtain, namely, those of Sir Farrer Herschell and his juniors. "We were asked," he said, "why we did not go back to the opinions of

* Members of the Executive Committee—The President, Dr. Pitman, Dr. Haldane, Dr. Aquila Smith, Mr. Simon, Dr. Humphry, Dr. Quain. Members of the Dental Committee—The President, Dr. Pitman, Dr. Haldane, Dr. Aquila Smith, Dr. Humphry, Dr. Quain.

Mr. Justice Bowen and Mr. FitzGerald. In the first place, Mr. Justice Bowen was on the Bench, and we could not go to him again, and, with regard to the opinion he had previously given, he had not an opportunity of advising on the facts. He advised upon the various questions submitted to him on the formation of the Register, but never on the facts." Now, these statements will not bear comparison with those contained in the Council's Minutes. The Register was formed on October 17th, 1878. Lord Justice Bowen's opinion is, according to Mr. Farrer, dated March 3rd, 1879, when 4,725 out of the total of 5,289, had been registered. Then, as to the "facts;" the main and indeed only important fact, known by simple reference to the annually published Medical, Pharmaceutical Chemists, and Chemists and Druggists Registers, was that these persons whose cases were under consideration were not qualified to practise pharmacy, or medicine, or surgery, and whether they were entitled to registration was the question upon which Lord Justice Bowen was consulted by the Council in March, 1879, and Mr. G. A. R. FitzGerald (October, 1879) by ourselves; upon which Sir Farrar Herschell was consulted (December, 1880) by the Executive Committee, and Lord Justice Holker, in July, 1881, by the Association, namely, whether the practice of medicine, surgery and pharmacy recited in the Act means the legal practice of those subjects. The Committee found that, according to Lord Justice Bowen and Mr. FitzGerald, the Council had registered something like four hundred persons who had no right to registration, and Sir Farrar Herschell absolved them from the difficulty by saying that the subjects named in the Act did not mean the legal practice of those subjects. So much for Dr. Quain's performance as an historian. The Minutes of the Council contradict the historical statements upon which the whole force of his advocacy depends. A word more and we shall have done with the historian. Dr. Quain says that the Dentists' Act was not brought, as desired by the Council in an amendment proposed by himself, into conformity with the Dental Section of the Lord President's Bill. "The whole force of our amendment was (he says) to place it in the hands of an independent Board." The Bill as it came to the Council for its opinion contains a clause empowering the Council to submit to the Privy Council a scheme for the examination, licensing, and registration of dentists under the control of the Medical Council. This was objected to by the Council in a resolution to the following effect:—"That it is not desirable that the Medical Council should be required to undertake

to originate a new scheme of Examination Rules (section 1 of clause 23), but that it should be entrusted with such supervisory power as regards the educational details from time to time proposed by the Medical Authorities authorised in the Duke of Richmond's Bill, as it already exercises with regard to other examinations." The Government accepted this suggested amendment, and with a concurrence which we could not withhold, drew the amendments which were made part of the Dentists' Act in conformity thereto. The Minutes of the Council (April 13th, July 1st and 4th, 1878) contain a complete refutation of the allegation that the Government did not bring the Dentists' Act into conformity with the Dental Section of the Lord President's Bill as amended and then approved by the Medical Council.

Mr. Farrer, in continuing the history commenced by Dr. Quain, said he had referred the opinion of Lord Justice Holker and his coadjutors, with the whole of the facts, to Sir Farrer Herschell for his reconsideration. It was elicited from him that he had not included in the reference the opinion of Lord Justice Bowen, alleging as a reason for not doing so that "it was an opinion taken before the Register was formed and with a view to the formation of the Register."

Mr. Farrer is the successor of the late Mr. Ouvry, and probably was not intimately acquainted with what took place in 1879, otherwise he could certainly not have made this statement. He, however, admits that the bearing of Lord Justice Bowen's opinion is in the same direction as that of Sir John Holker's, and we know the two opinions embrace the same points, and are directly at variance with that given by Sir Farrer Herschell. Wholly disregarding Lord Justice Bowen's opinion, taken by the Council, "It will," Mr. Farrar, says, "be impossible for you to act upon the opinions taken adversely to those of your own legal advisers." "Under these circumstances, I do not think the Council can or ought to take any other course than that of following the advice contained in the opinion I have read;" that is the re-considered opinion of Sir Farrer Herschell.

Dr. Storrar, in a short but able speech, moved that the several opinions, four in number, be inserted in the Council's Minutes. "Do let us," he said, "see these opinions, do not put blinkers upon us, and ask us simply to follow Mr. Farrer."

Mr. Farrer, in reply, again urged that Lord Justice Bowen's opinion was taken on the formation of the Register, adding that,

"The question here is whether you shall erase names already on the Register;" and he pointed out the consequence to the Council if beaten in an action for the restoration of an erased name, thus leaving in the mind of the hearer or reader the impression that he thought erasure would follow the passing of Dr. Storrar's motion, and that action for restoration against the Council would follow.

Dr. Quain, in speaking to Dr. Storrar's motion, said, "One of the most prominent questions that have been discussed to-day is why Mr. Justice Bowen's opinion was not printed and published; but it was acted upon, and, in fact, it is this opinion, joined with Mr. FitzGerald's, that has led us into all this trouble." But it could not be so, for Mr. Justice Bowen's opinion was taken five months after the Register was fully formed, two months after it was decided to use the terms "with pharmacy" in the Register; Mr. FitzGerald's, eight months still later, and after the Register was in print. The evidence goes to show that it was not the acceptance, but the neglect of these opinions which led to "all this trouble."

Sir William Gull successfully argued that, the names having somehow got into the Register, it was inexpedient to remove them. After much irrelevant speaking, in which expediency over-shadowed justification, Dr. Storrar's motion was negatived. The President, during the discussion, urged the adoption of Mr. Farrer's advice, and said, "Those who thought the Council has been in the wrong should attack the Council." The Council, in fact, fearing the corrective laws it had caused to be enacted, sought protection under the wing of its legal adviser, rather than exercise the judicial function with which the Act endowed it, and, in declining to publish the opinions, declined thereby to enter judicially upon the consideration of the correction of the Register. In this particular business it would seem as though the Council had followed the lead of the Executive Committee, the Executive Committee that of the Dental Committee, and that the Dental Committee had been led by Dr. Quain, the would-be hostile administrator of the Dentists' Act. I will terminate this historical sketch by an extract from the speech of the Rev. Dr. Haughton, on his introducing a motion on the last day of the session to the effect "That the proceedings of the Council with regard to the registration of Dentists have been at variance with the opinion of Mr. Justice Bowen." "If," he said, "he were about to press this resolution he would have to make some slight alteration, namely, 'the procedure of the Council with regard to correcting the Re-

gister of Dentists." "Having seen the very careful opinion of Mr. Justice Bowen, and knowing the high esteem in which that gentleman stood amongst his professional brethren, he (Dr. Haughton) thought it a very serious thing for the Executive Committee to depart from his explicit and distinct advice." More need not be quoted, as the speech will be found in the July number of our Journal.

I have endeavoured to place before the Association the essential facts bearing upon our contention that the Register requires correction, with the proofs upon which those facts rest, and I have done so as succinctly as the subject would allow consistently with the exposure of the great and numerous misrepresentations and misapprehensions that have obtained currency upon this troubled subject.

It remains for the Association to decide whether, under the circumstances described, any, and if any, what further steps should be taken for the furtherance of a correction of the Register admitted to be incorrect. In this connection it must be borne in mind that the Dentists' Act, notwithstanding the hostility of Dr. Quain, has, on the whole, been administered by the Council with great success, and with great advantage both to the public and to the dental profession. The partial failure has been limited to a matter of secondary, though great, importance, and is due to the legally advised want of care in the admission of a certain class of persons to the Register.

Registration was commenced in the true letter and spirit of the Act. Those who combined callings other than those specified in the Act with the practice of dentistry were refused registration, but the Chemists' and Druggists' Register was not referred to in order to make sure that those who claimed to practise dentistry with pharmacy were entitled to practise pharmacy. In the absence of this precaution the four hundred crept in. But the evil had been done before (Mr. now) Lord Justice Bowen was consulted. The numerical magnitude of the evil was not known till after the publication of the initial Register and the list subsequently sent in by the Association drew attention to the fact.

Sir Farrer Herschell was brought to the rescue, and provided the Council with the opportunity of embracing a technical excuse for inaction. The duty of calling attention to what we, on sufficient evidence, believe to be great errors in registration has

been discharged by the Association. The duty of correction lies wholly with the Medical Council.

The tone of regret must now be changed for one of congratulation.

The question of the registration of additional qualifications was settled satisfactorily, so soon as the Council on this question accepted and acted upon its judicial functions, and disregarded the counsel of those who could not be competent to advise. A further and highly important exercise of the judicial functions of the Council was effected in the condemnation of practising under a false name, as being both illegal and unprofessional.

The last subject I have to mention is the report of the Royal Commission on Medical Bills. The President of the Association was called upon to give evidence before the Commission and the opportunity of claiming representation on the Medical Council was accepted. Not, however, with the expectation of success, for it was known that general opinion favoured a reduction in the number of members. Another party sought to deprive the Licentiate in Dental Surgery of his right to use the title of Dental Surgeon, but the effort was altogether unsuccessful.

The Report of the Commissioners is published, but the evidence has not yet been issued; until this is published it would be premature to enter upon a discussion of the merits either of the evidence given, or the Report thereon.*

A general review of the passed year gives ample proof of prosperity and success, but on leaving the presidential chair I desire to call the attention of the Association to the too obvious fact that there are hostile influences which it will be the duty of the President and Representative Board to carefully watch and if need be to antagonise.

This watchfulness will be especially necessary when the promised Medical Bill comes before Parliament; of all our enemies, however, the one we have most to fear is apathy in our own ranks.

In my successor the Association has secured the services of one who will show superior energy and wisdom, and under whose rule we may confidently expect to prosper by the exercise of beneficial activity.

* The Blue Book containing the evidence given before the Commission has been published since this address was written. We hope to give an analysis of its contents, so far as they bear upon the interests of the dental profession, in our next number.—Ed.

It remains for me now on leaving the chair to express my sincere thanks to the Association, to the Representative Board, and especially to the Hon. Secretary, Mr. Smith Turner, for the active and cordial support rendered to the President during his past year of office."

The CHAIRMAN : In the name of the retiring President, I have to read a resolution which he recommends should be adopted, and which covers a considerable amount of ground. It is as follows :—"The British Dental Association, while it wishes to express its gratitude to the Medical Council for the many and highly important services rendered to the dental profession in past sessions, views with deep regret the renunciation on the part of the Council of the judicial powers conferred upon it by the Dentists' Act in favour of a personal leading in respect to even entering upon a consideration of the correction of the Dentists' Register."

Mr. CAMPION : I have very great pleasure in proposing the resolution with the substance of which I most thoroughly coincide.

Mr. R. ROGERS (Cheltenham) seconded the resolution, and it was carried unanimously.

On the motion of Dr. WAITE (Liverpool), seconded by Mr. BROWNIE (Glasgow), it was resolved :—"That the Hon. Secretary be directed to forward the foregoing resolution to the Registrar of the General Medical Council, with a request that he will lay it before the Council."

Mr. WEISS moved, and Mr. VANDERPANT (Kingston) seconded the following resolution, which was also carried :—"That this meeting hereby expresses its continued confidence in the Representative Board, and trusts that, with the co-operation of the President and the Business Committee, the Board will continue its efforts to further the objects of the Association."

Mr. RYMER moved "That the cordial thanks of this meeting be presented to John Tomes, Esq., F.R.S., for his invaluable services as President during the past year."

Mr. WEST seconded the motion, which was carried amidst loud applause.

The CHAIRMAN : It now becomes my pleasing duty, in accordance with a resolution passed at the last annual meeting, to introduce to the chair Mr. Campion, of Manchester. Your reception of his name is a sufficient guarantee that the meeting last year exercised a wise discretion in confiding the interests

of this important Association to the hands of one so well calculated by his capability and character to successfully pilot the vessel through the storms and breakers that may be ahead. Mr. Campion's reputation in the profession needs no encomium from me ; it is patent to the whole of his professional brethren, and has been for many years. His great capability and strict integrity make him an honour to the profession. Mr. Campion, with that modesty which generally goes side by side with the possession of power, has the feeling—and I don't wonder at it—that the office to which you have elected him is an extremely important one, and one requiring the exercise of great caution, seeing that the Association has much before it, and is only, as it were, on the threshold of its work ; but, with these qualms, he is supported by the fact that his election received the sanction of the whole of his professional brethren. With these few words, gentlemen, I quit this chair, and request Mr. Campion to take it.

Mr. CAMPION, having taken the chair amidst loud applause, said : Gentlemen, the remarks of your late Chairman have taken me so much by surprise that I feel that I cannot do more at the present moment than thank him for them, and thank you for the kindly way in which you have received them. I will at once, therefore, proceed with the few words I have to read to you.

In offering a hearty welcome to the members of the British Dental Association from its Midland Branch, and more especially from its Liverpool members, I must not forget, gentlemen, to express my full appreciation of the honour you have done me in placing me in the proud position in which I now find myself as President of our Association for the coming year.

I well remember when at school hearing one of the junior boys translate the Latin phrase *Necessitas non habet leges* as "Necessity has no legs." If he was moralising on the misfortune of being unable to run away from the stern necessity which obliged him to try and master what seemed to him a difficult task, I can fully sympathise with his feelings ; and since my legs have failed to relieve me from the necessity of appearing before you in my present responsible position, it only remains for me to crave your kind indulgence during my term of office, and to assure you that my failings, which I fear will be many, will not be from the want of a strong desire and an earnest effort on my part to assist to the best of my ability in carrying out the objects for which our Association

was formed. I must, however, confess that were it not for the kind consideration and assistance that past friendly intercourse assures me I shall at all times receive from those with whom I shall be associated, my heart would indeed fail me when I consider the responsibilities of the position, and the utter impossibility of my being able, with anything like satisfaction to you or to myself, to follow in the footsteps of him who has so recently vacated this chair. Vain, indeed, would it be for me to imagine that anything I may say can increase the respect and kind regard which I am sure you all feel for our late worthy President, Mr. Tomes. From the time of our earliest recollections, his name has ever been associated with efforts for the recognition of our branch of surgery by the College of Surgeons, and with every other movement for the elevation and good of our profession, and I am sure you all will unite with me not only in expressing our disappointment at his absence from our meeting to-day, but also the great regret we feel at the cause which has prevented him from joining us, and our sincere sympathy with him in his present anxiety, and also join in the hope that he himself may be spared to us for many years to come, and be permitted to see in the rising generation that surrounds him, the good fruit which is slowly but surely being matured by the success of those schemes to which he has so nobly and earnestly devoted his energies during a long and active life.

As his able and interesting address, which you have just heard, contains all there is to be told you about the present of our Association, it has been suggested that I should say a few words to you respecting the future. It would be easy and interesting to draw up an ideal scheme for our future guidance, and picture in glowing colours the success which we all hope is in store for us, but such a course would not be very profitable, and I will, therefore, confine my remarks to a few practical points which I think it will be well for us to keep in mind, and, knowing the amount of work there is before us, I will not detain you long.

I have heard it recently asked more than once whether our meeting for the reading and discussion of papers on scientific subjects is in accordance with the objects for which our Association was formed, and whether many of our early members did not join on the understanding that this was to be (if I may so use the word) solely a political, and not a scientific society.

On referring to our Articles of Association, I cannot see that a meeting such as we are holding here to-day is in any way contrary

to the objects for which the Association was established, which we are there told was for the promotion of dental and the allied sciences, the maintenance of the honour and interests of the dental profession by periodical meetings, the publication of a Journal and occasionally of transactions and other papers, the formation of a benevolent fund, the maintenance of the spirit and provisions of the Dentists' Act, and other things incidental or conducive to the attainment of the above objects.

We cannot for a moment imagine that "periodical meetings of the members of the Association and of the dental profession generally in different parts of the country," as mentioned in our Articles of Association, would prove sufficient in themselves to command the interest and support of the members of the profession throughout the provinces if the transactions of those meetings were to be confined solely to the routine business of the Association. We can well understand the founders and supporters of the Odontological Society looking with an anxious eye on anything that seemed likely to provoke an opposition to, or interfere with the well-being of that society, but I am sure you will all now agree with me that there is room enough for both societies, and that each has its own independent sphere for action without necessarily intruding on the province of the other.

Man is essentially a social animal. We are social in everything we do. We associate for the purposes of business, of amusement, and pleasure, and sad experience teaches us that men will only too often associate for evil if they are not already associated for good. If such be the tendency of human nature, it surely would be a great mistake not to endeavour to utilize it for the purpose of promoting a cordial understanding and kindly feeling amongst the scattered members of our profession. Nor is this all the good that may be anticipated from meetings such as we are holding here to-day, for, as we were told by the distinguished President of the late International Congress, "from the interchange of ideas which naturally results from the bringing together men of all kinds of mental power, knowledge, and skill, ready alike to acquire and to impart knowledge, knowledge itself must be increased." Since, then, the benefits to be derived from association are so many and so great, surely they ought not to be confined to those whose privilege it is to be within reach of our great metropolis, but, if possible, they should be extended to all the members of our profession throughout the country, and,

as the Odontological Society is unable to meet these requirements, we cannot be said to be intruding on its province by meeting as we are to day for the purpose of supplying that element of social and professional intercourse so essential to the well-being and to the further development of our profession, which neither that nor any other existing society is able to promote.

For the furtherance of this important object I think one of our first efforts should be to make our meetings as attractive as possible, in the hope that all the members of our profession in the immediate district in which our meetings are held will thereby be ultimately induced to join the Association. The arrangements for our present meeting seem to me to coincide most fully with this idea, as we have provided for us papers on Dental Surgery, Pathology and Mechanics, and other less formal communications which it is hoped will be productive of interesting and instructive discussion. There will also be, I am glad to say, a series of "clinics," or operative demonstrations, which have only recently been attempted in this country, and which I am sure will prove both interesting and instructive.

The value of these has long been known in America, and the good results to be derived from them were fully illustrated at the London Dental Hospital, at the late meeting of the International Medical Congress, where not only did some of our American brethren kindly shew how readily they could operate in public for the benefit of those who were anxious to learn, but many also of our own members proved that they were fully equal to taking their share in this useful and instructive portion of our meeting, thus shewing that we have amongst us the material, and that it only wants to be developed to render it one of the most instructive and interesting portions of our annual gathering.

Another important element is the Branches, which promise to become such useful portions of our Association that they deserve universal support and encouragement, and it is therefore gratifying to know that they are increasing in number. What I have just said of the benefits to be derived from our annual meetings applies with equal or even greater force to them. Not only do they give more opportunities for the reading and discussion of papers, which must necessarily be limited at the Annual Meetings of the Association, but they offer facilities for many of our younger members to give us the benefit of their experience, who, probably from timidity or other causes would be unwilling to come forward in a

large meeting such as the present one, and thus we may hope to encourage and bring to the front many who, without these opportunities, would be lost to the Association, but who, by this means, may ultimately be made some of our most useful working members.

Here, if I may venture to do so, I should like to drop a friendly caution. Experience teaches us that the tendency of all similar societies has been to become, as time goes on, more and more elaborate, and necessarily more expensive, in their social element without any corresponding increase in their utility. Fancying that I can trace the shadows of the coming event I take this opportunity when some members of all our Branches are probably present, to venture to suggest that, as our Association will for the future meet annually in the provinces, and all its members will then have an opportunity of joining in the larger social gathering, whether it might not be desirable to discontinue the *formal* dinner after the Branch Meeting, or defer it to every second or third year, so that those who are anxious to do so may be able to return home after the business of the meeting is concluded without the feeling that by so doing they are causing disappointment to their friends, it still of course being open to any who like to do so, to meet socially but in an *informal* manner. All such arrangements must, however, be regulated by local and other influences; but, in whichever direction they may tend, I feel certain I may venture to urge on each individual member the desirability of supporting the Branch in his own district, as, by so doing, I believe that he will be assisting greatly in forwarding the objects of the Association, and let us hope that the Branches will continue to increase in number, with additional benefit to the individual members, and also to the Association at large.

In considering the future we must not forget that it will in a great measure be built on the present, as the present has derived its origin from what has preceded it. We, at the present time, are appropriating and enjoying the benefits derived from the labours of those who have gone before us, and since we are unable in any way to repay them for the privileges we have derived from them, let us at least in our turn endeavour to leave those who will follow us as our debtors in the same manner as we feel ourselves indebted to those from whom we have derived our present advantages.

For the attainment of this object let each one patiently and thoughtfully employ his best energies in that line of research for

which he feels himself best suited ; and, ever remembering the Platonic dictum that opinion is only midway between knowledge and ignorance, let him search for the truth—ever one of the noblest occupations of the human mind—reflect, and record his observations accurately, thus endeavouring to add to the general store of facts ; for it is by the accumulation of facts that all true scientific knowledge is increased. The deductions which we draw from them, and which now appear to us to be the truth may, as time goes on, be superseded by others more nearly approximate to the truth itself, but the facts will ever remain the same, and will not only be of present value, but will be a living power, the influence of which will extend to future generations.

The subject of the Register and the Dentists' Act will be brought before your notice by others who are more conversant with their present working than I am. Much as we must all regret the present state of our Register, we have the comfort of knowing that time will amend it in spite of the authorities, if they are unwilling to concede to us what is only an act of bare justice ; and let us be encouraged by the knowledge that the future benefit to the profession will more than compensate for the difficulties and disagreeables of the present time. The fact of his name being on the Register, or his being able to write L.D.S. after it, will not place an uneducated man on an equality with an educated one, or give him a practice, or make a gentleman of him, or teach him to be kind and gentle and courteous to his patients.

I once heard the initial letters of an honorary degree following a name very happily compared to the figure o amongst the numerals, which when placed in an unduly prominent position before another figure makes no addition to its value, but which, in its proper subordinate position behind, adds tenfold to the value of the figure that precedes it. And let us not deceive ourselves and expect too much from the Act, which although it gives us certain privileges, such as exemption from serving on juries, &c., was designed as much or even more for the protection of the public than for the benefit of the profession.

It can only guarantee to the public the certainty that any one who professes by its authority to be a qualified practitioner has acquired such an amount of professional knowledge as was sufficient to enable him to pass an examination, the standard of which is the minimum amount of knowledge that is considered necessary to qualify him for the practice of his profession. And let no one

suppose that his education must end there, for even then there is much to be learned that can only be acquired by laborious voluntary efforts; and to the attainment of these ends our Association can contribute in no small degree, not only by what is to be gained by the mutual interchange of ideas and experience, but also by the moral influence which the general consensus of opinion can exercise in the support of all the more noble and honourable principles of action, as well as by the discouragement of all such acts as would tend to lower the moral status of our profession.

The papers that will be read to-day will treat of subjects having an important influence on the health of the community. Dentistry falls into three principal divisions of Surgery, Pathology and Mechanics, and on our more or less accurate knowledge of them, will greatly depend the amount of good we are able to confer on our suffering fellow creatures, and the comfort and success with which we practise our profession. True it is that our attention being directed to one branch of surgery only, the ground we have to go over is to a certain extent limited, but this, far from being a drawback, should lead to a greater concentration of ideas and a more perfect investigation of the various phenomena that are brought under our notice.

But I must not forget my promise, gentlemen, and I will, therefore, in conclusion only remark that, as our present meeting will possibly be referred to as a precedent, and will probably be a guide for the management of our next, a year hence, let us therefore watch its results carefully, and endeavour to judge it fairly and kindly, remembering that, as it is the first meeting of our Association in the provinces, the knowledge that may generally be derived from past experience is in the present case unavailable, and that those who have been the chief instruments in perfecting the arrangement of its details have had, therefore, to rely in a great measure on their own initiative powers. But I believe I may safely say the work has been to them a pleasure, which will be increased tenfold if it should in any way add to the enjoyment of those members who are now present, and conduce in any slight degree to the well-being of our Association, and to the furtherance of those objects for the which it was established."

On the motion of Major R. E. STEWART, a vote of thanks to the President for his address was carried by acclamation.

The meeting was then adjourned for lunch.

THE DINNER.

THE Annual Dinner took place in the evening at the Adelphi Hotel, and was largely attended. The chair was occupied by the President, H. Campion, Esq., and the vice-chair by T. Underwood, Esq., Vice-President. Amongst those present were the Mayor of Liverpool (Mr. John Hughes), Mr. J. Smith Turner, London (Hon. Secretary), Major R. E. Stewart, Captain R. Rogers, Captain Newman, Dr. Gee, Dr. Glynn, Dr. Simpson, Dr. F. Heath, Dr. Braidwood, Dr. Walker, Dr. Kisch, Dr. R. H. Johnson, Dr. Pollard; Messrs. W. B. Macleod, H. Sewill, A. J. Woodhouse, S. Wormald, C. S. Tones, A. Coleman, S. L. Rymer, Edgar Browne, C. Vasey, T. Dilcock, T. J. Moore, R. White, J. Parkinson, T. Dawson, W. Heath, H. C. Quinby, Oakley Coles, M. Quinby, J. G. Roberts, F. J. Paul, and most of the Members whose names appear in the list already given.

After dinner, "The Health of the Queen and Royal Family" having been proposed by the PRESIDENT, Mr. UNDERWOOD proposed "The Army, Navy, and Reserve Forces," to which Major STEWART responded.

Mr. COLEMAN then proposed "The Manchester School of Medicine," which was, he believed, one of the longest established of the provincial schools, and was, moreover, connected with that admirable institution for scientific instruction, Owen's College. It had a rival—an honourable rival, he believed—in the Liverpool School of Medicine, and the result of that honourable rivalry and that valuable and wholesome competition had been that the two schools had profited. Between those two institutions he believed there was a union proposed, and that some arrangement might be made by which the students of both might avail themselves of another most valuable foundation in Liverpool, the University College, for obtaining that scientific and literary instruction which was, and should always be, the precursor to medical knowledge. He hoped that at some not very remote future Members of their body would be able to avail themselves of the degrees that would be granted by the Victoria University. It had been his great privilege to have been connected for many years with one of the largest of the London schools of medicine, and there he had often met gentlemen who went through a portion of their course of study at the provincial schools, and for certain purposes finished at the London schools, and it had been his remark, which was well borne out by his colleagues at that institution, that those gentlemen were

as well taught as, and better grounded than, the London men. He had no doubt they were provided with better opportunities in the provinces; at all events, their teaching was up to the mark—nay, more than up to the mark—and the result was that from these provincial schools had been turned out some of the most celebrated physicians and surgeons of the day. It would be invidious on his part to point out on such an occasion men who had been educated at the schools of Liverpool and Manchester, and who stood prominent as surgeons and physicians, but he might go so far as to say that he had had the honour to be associated with gentlemen of the highest position as physicians and surgeons, and as men of high integrity and morality, who had been educated at provincial schools. He thanked the President for having asked him to propose this toast, and he had much pleasure in coupling with it the name of Dr. Simpson.

Dr. SIMPSON, in acknowledging the toast, said that either the irregularities of the train service, or some other reason which he was not aware of, had prevented some of his colleagues being present who would have responded to this toast very much more ably than he could—Dr. Lund, Dr. Morgan and Dr. Leach. Their names were in the list of guests, but they were not present, and it had therefore fallen upon him to respond to the toast, which he was certainly not prepared to do. He might say that those who had come there from Manchester had not come to put forward their School in rivalry with that of Liverpool, but rather considered them both engaged in the same cause, and in a race which was honourable to each, and in which if one was first the other was sure to be a good second. Both schools had great advantages, and he thought from his knowledge of medical education that the Provincial Schools might compare favourably in some respects even with those of London, and that in some points their students had superior opportunities. He thanked them heartily for the cordial way in which they had received the toast of the Manchester School, and he wished prosperity to the Liverpool School as well as to his own.

Mr. J. OAKLEY COLES, in proposing "The City and Trade of Liverpool," said it seemed to him a most felicitous circumstance that the first meeting of the Association in the provinces should have taken place in the ancient town of Liverpool. All its traditions were of a hospitable character, of which they had already had singular evidence, although they had only been there so short

a time as one day. It was also a most gratifying circumstance that on their first provincial gathering they were honoured with the presence at their festive board of the Chief Magistrate of the town. Those who were disposed to cavil at the social position of the dental surgeon might take consolation when they found so distinct a recognition from one holding so important a position as the Mayor of Liverpool. Liverpool was very intimately connected with the history of the dental profession, and he was not sure that they were all aware how intimately it was also connected with the history of the profession in America. The first dentist who ever practised in the United States of America started from Liverpool for that destination. But it was an unfortunate circumstance, and exemplified the inhospitable character of the United States of that period, that, after staying in New York and Philadelphia for two years, he returned to Liverpool. Following him, the next person practising dentistry in the United States was Monsieur Giardet, a surgeon of the French navy. Then came James Greenwood, the first native-born American dentist; and after him, a son of the same Wolfendon who started in 1806 from the ancient town of Liverpool. So that the first and fourth dentists who practised in America were from Liverpool, which was thus connected with the foundation of the profession in the New World. He had intended, as it seemed incumbent on him as the proposer of this toast, to make himself acquainted with all the details of the history of Liverpool, and he had gone about with those two bulky volumes of "Picton's History of Liverpool" in his pocket, and had glanced at intervals over the pages at the end of the Directory, with the view of obtaining such knowledge of the affairs of the town as would enable him to do due credit to the toast which he knew would be placed in his hands that evening; but the account of the town of Liverpool he had intended to lay before them was made up of fragments which he feared were not properly adjusted, one to another. There were, however, certain facts which stood out in his memory as landmarks. For instance, looking at the enormous acreage of docks at present existing, it seemed incredible that within something like 200 years there was only one dock in Liverpool, and that the only one in England. It seemed amazing that during that period Liverpool should have become the water-gate of England. This was a matter of congratulation to the Liverpool people; but it was a matter of congratulation to the Members of the British Dental Association that

they had had the honour of holding their first provincial meeting in this ancient town. He had, therefore, extreme satisfaction in proposing "The City and Trade of Liverpool," and in coupling with the toast the name of the Mayor.

THE MAYOR, who, on rising to reply, was loudly cheered, said he felt very much indebted to the gentleman who had proposed the toast, and very much obliged to the company for the kind way in which they had received it. He was sorry that the gentleman who proposed the toast was not well posted up with regard to the history of Liverpool during the last twenty years. During that period the town had made wonderful progress, as he thought they would admit when he told them that the dues paid at the port, which, twenty years ago were something like £4,000,000, amounted in 1881 to between £7,000,000 and £8,000,000. Having been placed in the proud position of Mayor of the city, his humble effort had been, and would continue to be, to fill the office with dignity, and to extend its hospitality not only to those who were citizens, but to those distinguished persons, and members of useful and important associations, who occasionally visited the city. He felt very great pleasure in being present that evening, at the request of his friend Major Stewart. He had intended to be absent from Liverpool on his holiday, but he felt that as the Dental Association was coming to Liverpool for the first time, it was his duty, as Mayor of the city, to do all he could to give the Members a cordial welcome. He was only sorry that he had not been made aware of their arrangements earlier, so that he might have had the pleasure of entertaining them at the Town Hall. He thanked them for the way in which they had received the toast, and he assured them that they would take away with them from Liverpool the hearty good-will of its Mayor and his best wishes for the prosperity and success of their Association.

Mr. A. J. WOODHOUSE said he was not fond of speaking, but there were times when those least fond of doing it had pleasure in making a speech, or trying to do so. He rose to propose the health of "The President." They had all known Mr. Campion for many years and honoured and respected him, as all who knew him must do. He had had perhaps a longer acquaintance or friendship with him than any one in the room. It had its commencement in a game of marbles. He was the President's senior at school and the President looked upon it as a great honour that he was allowed to play at marbles with him, a big

boy. They were afterwards pupils together and had been friends ever since. The Association had done wisely, and he was sure they all knew it, in selecting Mr. Campion as their President. In him they had found one who was an honour to the profession to which they belonged, and he hoped that they might in the future be able to find in other parts of the kingdom, men who would do as much honour as Mr. Campion did to the position he now held.

THE PRESIDENT: Mr. Mayor and gentlemen, I cannot conceal from myself that it is with mingled feelings of pleasure, distrust and fear that I rise to address you to-night, and to thank you for the hearty manner in which you have responded to the toast just proposed. I feel it a pleasure when I think of the progress our Association has made, and the success of our meeting to-day, and also when I look around me on this large and influential company assembled here to-night to do honour to the British Dental Association on its first meeting in the provinces. But this feeling of pleasure is more than counterbalanced by one of distrust when I consider my own inefficiency for my present important position, and by the fear lest I may be unable efficiently to protect the important trust you have this day committed to my charge. Would that I could think myself deserving one-half the kind things my friend has just said of me, and that I could feel that my actions in times past had been more in harmony with the thoughts of the Poet when he wrote—

Small though our strength, let each do what he can :

Whate'er conduces to the march of mind,

Whate'er binds man in closer ties to man,

Should in each generous heart a patron find.

Gentlemen,—I look upon this day as marking an era, and a very important era, in the history of our Association—an Association which, I think, may not inaptly be compared to one of those grand productions of our naval architects which for so many centuries have formed the unconquered bulwarks of what the old song so quaintly describes as “our tight little island,” and have also proved the foundation of the wonderful commercial prosperity of this great and important city. Long may our barque prove as efficient in protecting our profession from the attacks of empirics and charlatans, and from the influence of all who wish us evil, as the wooden walls of old England have been in protecting her from her foes ; and may we never see the day when scientific specula-

tion will be permitted in either case to undermine any of the defences with which we are at present surrounded.

Gentlemen, many of you were present, and doubtless retain a pleasing reminiscence of the day when our ship was first launched on what has proved not to be a stormless ocean, and some of you know only too well the enormous amount of labour which was necessary for the moulding, fitting and binding together of the apparently incongruous materials out of which it was constructed. But, gentlemen, you also know that that labour contained within itself an unfailing element of success, for it was a labour of love on the part of those who bestowed it. Well, not only has our barque been built and launched, but having made its trial trip and taken its first cruise in what may be called the home waters, we are now met together to welcome it on its first voyage. Should it not on its return home be found laden to the full with untold treasures, still I trust the crew will at least be able to say with the voyagers of old when shipwrecked on the unknown island on their memorable voyage to Rome, "the barbarians showed us no little kindness;" but, be that as it may, certain I am that their visit will leave behind it such pleasant reminiscences that the next appearance of their barque in the northern seas will be looked forward to with no small amount of pleasurable anticipation. I will not detain you longer than to thank you, sir, for the kind manner in which you have proposed my health, and you, gentlemen all, for the hearty manner in which you have responded to it.

Mr. C. S. TOMES, in proposing "The Liverpool University College and School of Medicine," said that although he had a warm feeling of sympathy for every school of science, he had an objection—perhaps an unreasonable one—to speak of an institution which he knew nothing about, and so he got his friend Major Stewart to take him through the Liverpool School of Medicine that morning, that he might see it, as he had often heard of it as perhaps the most prominent of all the provincial schools; and in going through the laboratories, dissecting rooms, and lecture theatres of the school, he experienced the wish that his own student days could come back again, and the feeling with what zest one would set to work on all sorts of things if one had only the time and energy one had in those days. The Liverpool school had now got premises which were excellent for their purpose, and which were undergoing alterations in order to afford still greater accommodation to the students; and lectures on subjects apper-

taining to dentistry were now delivered to students going up for the examination of the London College of Surgeons. He had great pleasure in proposing the toast, and in coupling with it the name of Dr. Glynn.

Dr. GLYNN said he should have responded with much less hesitation to the toast of the Liverpool Medical School than to that of the University College, for he had not the honour of being a professor at the University College. At the same time, the two institutions were now so closely united that they must rise or fall together. For their success these institutions depended not only on the efforts of the teachers, but on the kindly feeling of sympathising friends, and he was quite sure his colleagues would all thoroughly appreciate the cordial expressions which had fallen from such a scientific and influential body as the British Dental Association. The University College was yet in its infancy, but he trusted the time might come when it might even rival that splendid institution in Manchester, Owen's College; and as to the Medical School, he hoped that whatever happened, the friendly relationship between it and the Manchester School would always continue.

The PRESIDENT said the next toast was "The British Dental Association and Branches," which would be proposed by Mr. Edgar Browne, and coupled with the names of Mr. Turner and Mr. Rogers.

Mr. EDGAR BROWNE said he thought first of all it was only courteous to thank them for their great kindness and the honour they had done him in asking him to be present that evening, and for the very pleasant evening they had given him. It was certainly to him a remarkable occasion, because it was the first occasion on which he had come amongst their honourable profession and not been afraid of opening his mouth. He found that their Honorary Secretary had the great judgment to give the strongest toast to the weakest speaker. It was only that knowledge which gave him the slightest encouragement to proceed with what would otherwise be a very uphill task, for he felt that he need say but little in proposing the toast which had been assigned to him. He would, however, go on and do his best to respond to the call of duty. It was a very great pleasure to anybody, whether connected with their special branch, or whether belonging only to that branch to which he was not ashamed to say that he belonged, to see any effort made to elevate the profession, because it was invariably

found that whenever efforts were made to improve the social status or position by the formation of an association of that kind, the movement was only the outward and visible sign of an aspiration which had begun within. They did not find men forming themselves into associations and endeavouring to raise themselves into positions unless a great many men in the profession had already raised themselves to good positions and become dissatisfied with certain drawbacks attending it. The great drawbacks upon all professions were not the heads of the professions but the tails. They had great difficulty in dealing with their tails. In that branch of the profession to which he belonged, they fondly imagined they had got rid of their tail—as the great Lord Monboddoo thought primeval man had got rid of his—by sitting on it. But their tail, though not quite in the position of the monkeys, was long enough to get into the mud. Then there was the clerical profession. He was sorry to say that that had a tail, and sometimes it was a very unpleasant tail, which unfolded itself in the police court when the weather had been very hot. The legal profession had also a tail, but like that of a pig at a fair, it was so carefully soaped that no one could get hold of it. It had been the misfortune of the dental branch of the profession to be kept down by its tail. The tail had been enormous in proportion to the body, and it had been a perfectly monstrous thing that men of ability, integrity and honour, men of good previous education, with all the attributes of gentlemen, men who in addition to all that had been spent upon their previous education, had given an immense amount of time and spent a large amount of money in premiums and fees in order to obtain a special skill, and had purposely delayed putting that skill into the market until they felt that it was the very best that could be put forward—it had been a sad and monstrous thing that men of such a social status should be in the remotest degree confounded with those impudent impostors who had just money enough to go to a marine store and buy a pair of forceps with which to break the jaw of the first person that came into their place. It was the honourable intention of this Association, and an intention which he was sure would be carried out, to raise the whole of the profession, and do away with all this unqualified practice, which was not only bad for the profession, but bad for the public. Therefore he thought he should carry the sense of the company with him if he asked them to drink in all sincerity

the prosperity of the Association, joining with the toast the names of Mr. Turner and Mr. Rogers.

Mr. SMITH TURNER said he rose to respond to the toast which the company had just received so kindly, with a feeling of depression, not that he had had a day's work which had overcome him, or that he had been overcome by anything which had followed the day's work, but because they would find on the programme that the person who was to have responded to this toast was their esteemed ex-President, Mr. John Tomes. He was sorry to say that Mr. Tomes had been prevented from being with them that day by a severe family affliction. Nothing else would have kept him away. He was most anxious to attend, but he found that his duty lay most imperatively in another direction. With regard to the British Dental Association it was only, as had been well remarked, a baby going through its first dentition, and he had not even a period of twenty years to go over to refer to events in its past history. But the history of the Association had not been altogether unchequered. Most of them knew that it had its origin in the consummation of the work of the Dental Reform Committee when the Dentists' Act became the law of the land. One of the objects of its originators was to promote social intercourse between members of the profession, and he thought that, if the company looked around, they would admit that in that respect, at any rate, there had been no failure. It was also felt that by holding meetings, reading scientific papers, and discussing the merits of certain courses pursued in their practice, they would not only increase the interest they took in each other, but would enlighten themselves on various matters in regard to which, by isolation, they were kept in ignorance, and so be able to serve the public more efficiently in the calling to which they had devoted themselves. Then, another of the objects they had in view was to maintain the status of the profession in the spirit of the Dentists' Act. That Act was, as they thought, a very efficient Act, if properly interpreted by the powers that be. He would not detain the company long with this matter, because it was getting a stale story, but he thought it well that one or two who had not followed the history of the matter should know something of the events connected with the progress of the Dentists' Act and the British Dental Association. They must know that this Act gave certain powers to the Medical Council. Now, this Medical Council seemed to him to be a very peculiar body. It seemed to him to

be essentially a talking body. It refused to take up the functions that had been conferred upon it by the Act of Parliament ; it refused to become an administrative or a judicial body, and to exercise the powers that had been given it, but it shielded itself under some paltry quibble, or the opinion of some half-fossilized lawyer. The tail of the dental profession had been alluded to. It had indeed a very long tail. Some people thought it was all tail. But they were not afraid of that, for they believed that there was some good muscular tissue in it, and they had no fear but that it would become developed in such a manner that the caudal appendage would become less and the vertebræ would become larger and stronger. But they had attached to this tail a heavy weight which was not anatomically, or even legally, connected with it, but connected with it only by some twisting of words which had been employed by some of the leaders of the Medical Council in interpreting the Dentists' Act. As a consequence they had attached to their tail a weight of dead matter which he was afraid must remain there for a long time to come. He thought it was a pity that a number of men who had been employed as chemists' shop boys, &c., should have been allowed to come on the Dental Register, for the sake of discrediting that Register in the eyes of the Medical profession. It was an unfortunate thing that these men should have been allowed to come on the Register, not because they could do any particular injury to the rest of the profession, for he was quite sure that the old men now amongst them in the profession were quite competent to hold their own against such pretenders to dental knowledge ; but he thought it was a pity for the sake of the general public that the Medical Council should have so far abrogated its functions as to allow such a number of unqualified men to come on the Dental Register. He thanked the company in the name of the British Dental Association for the manner in which they had received the toast, and he thanked them personally for the honour they had done him in having associated his name with it. As he stated before, he was extremely sorry that so great a man as their ex-president should have been represented by so poor a substitute.

Mr. R. ROGERS responded on behalf of the Branch Associations, which he said he was sure would always do their best to aid the Central Association. There were, he believed, now four Branch Associations, and the sooner they had a branch in every county in England, the sooner they would resemble the British

Medical Association, which he believed they held up as their standard. He was surprised that the Eastern Counties' Association had not affiliated with the General Association, and he hoped that before the next meeting they would have done so, for it was a moral impossibility for them to work amicably together unless they were united.

Mr. R. WHITE next proposed "The Honorary Secretary and other Officers." They all knew, he said, how much they were indebted to the Hon. Secretary for the wonderful energy and determination that he had thrown into the movement from the very first. It was well known, also, how warmly their admirable Treasurer had espoused the cause, and how much time he had given to it. With regard to the Eastern Counties' Association, he believed it numbered something like twenty-six Members, and he trusted that in due time it would become a branch of the British Dental Association. He had great pleasure in coupling with the toast he had given, the names of Mr. Parkinson and Dr. Waite.

Mr. PARKINSON in responding, said he was in some measure disappointed with the smallness of the number of Members of the Association. It had always been on his mind that, looking at a list of the names of reputable persons practising dentistry, they ought to be able to count in their Association a vastly greater number. They numbered, he believed, something over 500, but he did not think they ought to stop there, for he was quite satisfied that by united effort they could go a great deal further.

Dr. WAITE also responded. He said many present would remember the admirable address delivered in April last by Mr. White, as President of the Eastern Counties Dental Association. In the course of that address he said he believed it better for the dental body to be connected with a profession so elevated as the medical. That feeling was undoubtedly gaining ground. The political aspect of the connection might be a matter for some diversity of opinion, but they would do well to consider other and more important aspects of their relation. If they would maintain their ambition to take rank as an important wing of the great healing army, they must certainly manifest a determination toward those qualities which had elevated the medical profession to its present standard. And what were those qualities? Briefly, they might be stated thus:—(1) A high degree of cultivation in scientific knowledge and practical skill; (2) unbounded generosity in making the resources of their cultivation available to public

necessity; (3) the spirit of self-sacrifice. The combination of these characteristics had evolved a moral tone that was unexcelled by any other other calling. That their medical brethren had delved into the mines of scientific lore, and brought out of nature's storehouse the marvellous secrets and resources that lay hidden therein; that they had acquainted themselves with the minute structure and functions of the human organism, and so, as it were, anticipated by investigation well-nigh every form of derangement to which that organism was liable; that they were equipped with remedies, appliances, and skill, ready to do battle with disease and wage oft-times successful conflict with death—all this, and much besides, went nowadays without saying; yet these alone were insufficient to explain the proud position held by the medical practitioner in the esteem of the entire community. He knew not where to seek an explanation, unless it were to be found in the moral tone that was so intimately associated with the general practice of medicine in this country, and he took it that dentists would benefit by their connection with the medical profession in the proportion in which they imitated and emulated their prominent characteristics. The least they could do was to declare themselves on the side of progress. They were progressing, and they meant to progress still further. The times of selfish inactivity were past: the period of self-consecration and self-sacrifice had dawned. It was a period of transition from darkness to light, from bondage to liberty—a period of sifting and searching, wherein the honesty of individual purpose would surely appear. Let them imitate their medical friends, and in another fifty years mayhap some one would point to the dental profession and admire its devotedness to the pursuit of knowledge, its patience in the application of ascertained methods, and, above all, its lofty moral tone, exhibited by its generosity and self-sacrifice.

"The Lancashire Lasses," proposed by Major STEWART, and responded to by Dr. CUNNINGHAM, was the concluding toast.

During the dinner the band of the Liverpool Press Guard played in the vestibule, and subsequently an excellent musical programme was provided by a glee choir.

ORIGINAL COMMUNICATIONS.

The Etiology and Pathology of Dental Diseases : what we know, and what we would like to know.

BY HENRY SEWILL, M.R.C.S., L.D.S. ENG.*

ARE the teeth of the more highly civilized nations, or of certain classes within those nations, structurally deteriorating? This question is being constantly asked, and as constantly answered emphatically in the affirmative by observers whose opinions are entitled to respect. They state that at the present time it is extremely rare to meet with children possessing jaws and teeth superior in development to those of their parents, and that it is the rule to find the opposite prevail, the dental organs of children, in the vast majority of cases, being of markedly inferior formation. This opinion being expressed, various hypotheses are started to account for it. On *a priori* grounds some argue that it is only what might be expected. A high standard of physical comfort implies comparative disuse of teeth and jaws. The advance of the art of cooking has rendered food so soft that it calls for little chewing. Disuse of the organs of mastication leads in time to their wasting; characteristics of parents are transmitted as hereditary characters to their progeny, until at length a deterioration brought about in the individual becomes a family defect, and a generation is produced with ill-developed maxillæ and imperfect teeth. This argument is supported by the observations of Mr. Mummery, who found well-formed jaws and good teeth in British burying-places of pre-historic man of the stone ages; a very considerable proportion of ill-formed and crowded jaws with apparent deterioration of the teeth, as evidenced by the presence of caries, in the Celts who succeeded, and still further deterioration in the jaws and teeth of the period of the Roman occupation—a period of great comparative luxury.

Against this reasoning it is pointed out that certain Asiatic races, who live on soft vegetable food, have well-made jaws and good teeth, therefore disuse of the organs of mastication will not in itself account for the alleged dental inferiority of the present day. It is next argued that, there occurs now—more than at any previous time—especially in the well-to-do and luxurious classes, sur-

* Read at the Annual General Meeting of the Association at Liverpool, August 26th 1882.

vival of the physically imperfect, of those naturally unfitted to live under less favourable circumstances. Vast numbers of the phthisical, the scrofulous, the rickety, and the congenitally syphilitic, who would formerly have perished in childhood, are now by science preserved alive to propagate their kind and produce a sickly race. As to this argument regarding hereditary disease we commonly notice teeth organically defective in the phthisical, the scrofulous and the rickety; and the evil effects of inherited syphilis upon the development of the dental tissues is a demonstrated fact.

In support of the main argument that dental deterioration is progressing it is further alleged that the demands upon the vital powers by the growth of the brain and nervous system, and especially their increased exercise in modern life, influence the development of the dental apparatus. The brain and jaws are alike fed from the common carotid artery, and it is urged, the demand for blood by the growing and working brain leads to imperfect supply to the masticatory organs. The cranial capacity of an average European exceeds that of the lowest races by nearly forty cubic inches, and this increase in bulk of brain is associated with an enormous extension in the complexity of the convolutions, and, in amount of gray matter, demanding a corresponding augmentation of blood supply. This is an argument of perhaps cardinal importance, as education is pushed keenly during the very period of second dentition. The massive jaws and perfect teeth of the extant savage contrast remarkably with the narrow maxillæ and defective teeth of the educated European.

It is difficult to call in question the next statement that general physical deterioration must involve the dental structures, but it is very difficult to prove that such deterioration has, on the whole, occurred in the case of any nation. Yet, certainly, among the peoples of Western Europe, France seems under the gravest suspicion in this regard. The exhaustion of the manhood of France during the wars of the great Revolution, following upon the previous long-continued abject poverty and misery of the people, appears to have left its mark upon the race to the present day. The more luxurious ways and vices of later times, and especially the artificial limitation of the number of their children usually practised by parents, can hardly have been without effect. This artificial checking of increase of population has been effectual in France, and France is the only European country whose people remain stationary in numbers.

This must act in several ways to the detriment of the physical

standard. It prevents, in great measure, that rapid destruction of the weaker in the battle of life, which takes place where there is a redundant population, and it enables even poor parents to rear sickly offspring who would probably perish for lack of sufficient care and necessities of life were the number of children greater. We must not forget, further, that the firstborn who are thus reared are, as a rule, more delicate than later-born children, and are those most liable to inherit some diseases, such as syphilis. The physical deterioration of the French seems almost proved, and the evidence, although not conclusive, goes to show that their teeth are ill-made in proportion. There is, however, a possible fallacy in this reasoning as regards the teeth, for the French are the best cooks in the world, and the whole population without exception lives upon the softest food, including bread of the most delicate manufacture. In the North Germans, we may see a people presenting a marked contrast to the French in the whole of their environment. Their climate is hard and ungenial, the soil ungenerous, and the whole nation comparatively in poverty. The classes who can be termed luxurious are insignificant in numbers, nearly the whole people, higher and lower, men and women, being engaged in arduous toil. Their diet is rough and simple, their bread coarse and mostly made of rye. These people, after the British, are the most prolific in Europe. Their racial characters give them a larger frame than that of the so-called Latin peoples, but, allowing for this, their physique would seem to be superior to the French, and offering it for what it is worth, as the result of my own limited observation only, I would say their jaw and dental development are, as a rule, vastly superior.

If there has been any general physical deterioration of the people inhabiting our islands within late years it must probably be due to such causes as the aggregation of great masses of the population in towns, the sanitation of which is imperfect, and in the occupation of great numbers of men, women and children in the vitiated atmosphere of crowded and ill-ventilated workshops and factories. On the other hand, the great bulk of the British were never before so well sheltered, so well clad, so well provided with food and the smaller luxuries of life; and this is especially true of the agricultural classes, from whose ranks the townfolk are largely recruited, and whose dwellings a generation back were a national disgrace. Never before was the public health so well cared for, and never was there such comparative freedom

from most diseases which leave their mark on the constitution of the victim, and lead to degeneracy in his descendants. Of living races the British is the most exuberantly fertile. The higher classes, although luxurious, are not enervated. They no longer take alcohol to excess, and their physique is maintained by their athleticism, which amounts to a passion, a passion not confined to youth or one sex, but affecting one and all, young and old, as testified by every scene of sport from the tennis court to the hunting field. I would suggest that if the organs of mastication are deteriorating, the cause in this country, at least, cannot be assigned to general decay. It may well be doubted whether the general development of any European nation is inferior at the present day to what it was in mediæval times. In that age famine and plague were regular periodic visitations, malignant epidemics were rife, and the whole life was spent amidst unwholesome and unsanitary conditions. We know that in stature and length of limb—that is osseous and muscular development—modern man notably exceeds his mediæval and more remote ancestors.

• In the people of the United States, there can be no doubt of the inferiority of the teeth, for the evidence is overwhelming; and the teeth seem worse as the ascent is made in the social scale. This remark, of course, applies only to that part of the population native by sufficiently long descent—to those upon whom the climate and other forces of evolution have set their mark. These influences would seem to be producing a specially modified type of humanity—a type whose most striking characteristic is enormous activity of brain and nervous system, and expenditure of vital energy through those channels. The decadence in development of the luxurious classes has been ascribed mainly to the unsanitary lives led by ladies—to their physical indolence, for their minds are only too active, their entire neglect of exercise and their devotion to literature: hours daily being spent on the couch while reading. Then their inordinate indulgence in sweets vitiates the appetite, and, creating dyspepsia, prevents due assimilation of food. It is alleged that certain vices of civilisation, based on dislike to the care of offspring, and copied from the French, have been extensively adopted. I believe it is the opinion of Dr. Da Costa, of Philadelphia, than whom there lives no more scientific or acute observer, that there has recently been a marked improvement in the physique of those American women who, thanks to the public discussion of the subject, have been induced

to abandon their bad habits, and to adopt a more hygienically, ordered life, and therefrom good effects are actually visible in the development of their children, including the teeth. If this observation can be extensively verified, its obvious importance cannot be over-estimated.

By some writers, who accept its increase as a fact, dental deterioration has been ascribed entirely to improper and imperfect feeding of children, and some have gone so far as to attribute the defect solely to the use of bread made of bolted flour instead of the whole meal in vogue in earlier times. Against this it must be stated that at no previous period were children of the well-to-do classes in highly-civilised States on the whole so well housed, clothed, and cared for hygienically as at the present day. No doubt, there are foolish parents who order the dietary of their children unwisely; but, as a rule, young children get an ample supply of nutritive food, and, if there be a failure, it must lie in the assimilative and constructive processes rather than in the chemical constituents of the food. If the teeth were defective owing to insufficiency of proper pabulum during their development, the whole osseous system which is built up of the same chemical constituents, must in every case be equally badly constructed.

After survey of the whole ground we must admit that on this subject of dental deterioration we have few solid facts. We know that there exist vast numbers of individuals with ill-made teeth and jaws. We know that some hereditary diseases, such as syphilis, which interfere with the due development of all the parts derived from the epiblast, lead also, in many instances, to imperfect formation of the tooth tissues. Beyond these facts, almost the whole subject is still, it must be admitted, in the region of hypothesis; and my object will be fulfilled if I have made this evident, and if I have attracted attention to the difficulties which lie in the way of drawing broad generalisations from the limited data at present alone at our disposal. We must be careful to bear in mind what the instances I have adduced were intended to illustrate—that the climate, food, and social conditions of nations vary in such a way as to make the main problem a very complex and difficult one to solve. We must, above all, guard against that too common error of associating effects with causes merely because they have relation in sequence, but to which they cannot be attributed by strict scientific reasoning,

and the incontrovertible facts of physiology. A much greater mass of facts, both numerically large and so closely observed as to be beyond dispute, must be gathered before any solution is possible. First, we must determine—for, I repeat, we are as yet far from certain—whether organic dental deterioration is really progressing at the present time, and, if so, whether this can be associated with any general or local physical changes. We shall next want to know what are the factors that can possibly go to produce these changes, and then, from sufficient facts, we may perhaps be enabled to draw a sound deduction.

Science is giving to mankind more and more the power to mould his physical future, and we need not fear that this power will be wanting in the case of the teeth, if once the problems are illuminated by the full light of exact knowledge.

In these remarks I have confined myself strictly to the consideration of the question whether organic deterioration of the dental tissues is at the present day on the increase; and this question must not be confounded with the totally separate inquiry, with which, however, it is constantly being mixed up—namely, whether decay of the teeth is at present more prevalent than formerly. We know that structural defect in the dental tissues is a prime factor in the causation of caries; but we also know there are other factors as potent, and that enamel and dentine of sufficient durability under favouring conditions will be destroyed if the agents necessary for their destruction be present in the mouth. We know as a fact that the diseases of our times, unlike those of earlier days, are largely those which give rise to the formation of such agents in the mouth, for many or most of them are either diseases of the digestive organs, or maladies accompanied by disturbance of the functions of digestion, and all these, in a greater or less degree, give rise to morbid conditions of the oral membranes and secretions, to congestion and inflammation of the mucous membrane, to pouring out of unhealthy mucus, to shedding of sodden epithelium, and to an acid state of the saliva. It may well be, therefore, that there is more tooth decay now than formerly, and at the same time by no means a relative increase in organic dental deterioration.

Thus far I have only alluded to the structural defects of the dental tissues, with whose existence we are all so familiar; and it may be well, in approaching more closely the pathology of caries, to remind ourselves of what we know of the exact character of

these organic weaknesses. We know that in some few individuals teeth withstand the extremest hard usage and neglect; whilst in others they show traces of decay in earliest childhood, and are destroyed at length in spite of active treatment. Instead of a dense homogeneous mass as hard as quartz, the enamel of such delicate teeth is found on examination comparatively soft, owing to imperfect calcification, and porous in consequence of incomplete coalescence of its elements. It presents a marked fibrous character; the fibres are imperfectly blended; their transverse striæ are clearly evident, and they are often penetrated at their centres by tubes or small cavities. At places the fibrous character may be lost, the tissue consisting of an imperfectly united granular mass. Defects are often visible and palpable, as in honey-combed teeth and the typical notched teeth of syphilis. The dentine, instead of being good ivory, is soft, and contains here and there throughout patches of granular formation, with spaces full of organic matter unimpregnated with lime salts. Of course it does not by any means always happen that all such structural defects exist together in one tooth; their degree and character vary extremely. It is not uncommon to find in teeth, otherwise fairly well made, one or two pits, or fissures, or patches of defective tissue, whilst in teeth of generally inferior structure, there are often portions of still feebler formation. What we would like to know here is what are precisely the processes through which the tooth germ becomes imperfectly developed? We know very little of the prime causes and nothing of the direct influences: the pathological changes by which the effects are brought about. Given, however, structurally defective teeth and the occurrence of vitiation of the secretions of the mouth, and we have two concrete facts which help us in replying to the query: what is caries? And this is a question to which we can now give a very satisfactory answer.

Caries must be defined as a process of disintegration, commencing invariably at the surface, and proceeding inwards, affecting dentine more rapidly than enamel, and due entirely to external agencies. We are now positively assured of the truth of these facts; that caries is not an inflammatory change, that it does not depend upon any connection, vascular or nervous, with the rest of the body, and that caries may even occur in an extracted tooth, which is retained in the mouth by artificial means, as on a denture or pivot. We must bear in mind, first, that enamel and dentine are soluble in acids which may be formed in the mouth,

and that the structural defects which I have described both furnish lodgment for acid-forming substances, and render those portions of the teeth easily acted upon and destroyed. The active agents in caries are acids and living organisms. The acids, malic, butyric, and acetic, are the products of chemical change and fermentation set up in fragments of organic matter, food, mucus, and epethelial scales, which are commonly present in the mouth. The organisms consist of micrococci, and oval and rod shaped bacteria, and a fungus called leptothrix buccalis. Acid is also derived from the organisms themselves, for certain kinds of bacteria secrete acid. The solubility of enamel and dentine in acids, not more powerful than would be derived from these sources, can be demonstrated.

(To be concluded.)

On Filling Materials and their Uses.

By H. P. FERNALD, L.D.S.I., D.D.S.*

MR. PRESIDENT AND GENTLEMEN :—The subject which I have chosen is of course familiar to every dentist, dealing as it does with the daily practice of the dental surgeon. But being that department of the profession with which I am most conversant, I was in a manner compelled to select it for my theme unless prepared to accept the alternative of quoting freely from the various text-books. My intention is, however, not to present a series of extracts such as any dental surgeon may easily form for himself by having recourse to his own or the book-seller's shelves; but rather to place on record some results of observation and practice which may be helpful to those who are for the first time taking up this branch of the dental profession, and which may at the present time supply a basis for discussion.

I do not profess to be in possession of any exclusive secrets connected with this subject, or to have such a perfect and exhaustive knowledge of it that I can learn nothing more from my own future experience, or from the experience of brother practitioners; I shall be gratified, therefore, if the discussion on my paper should supply to myself, or, perhaps to others, the means of perfecting further so important a department of our practice.

* Read at the Annual General Meeting of the Western Branch held at Cheltenham, August 6th, 1882.

The purpose we have in view is the arrest of decay, and the preservation of the teeth for the natural function of mastication ; and this we have to effect by closing any carious aperture with one of the different filling materials which we have at our command, restoring the contour of the tooth, enabling it to withstand the action of the saliva, and to endure the pressure put upon it when in use, and avoiding the use of materials which will tend to lessen the vitality of the surrounding tooth structures.

Of these filling materials *gold* is unquestionably the first. It cannot claim any healing qualities, but its purity enables it to resist the action of the saliva, and its durability fits it to withstand the mechanical wear and tear to which in certain cases it is necessarily subjected. It is of service either in good strong teeth, or in frail teeth, especially in crown fillings, where the wear of mastication requires a good basis to work upon, and in approximal fillings which may be exposed to the gum. In such places it is superior to any other material, and if the operator understands the manipulation of it he can make a perfect filling.

Many dentists profess to have the power of determining to a certainty beforehand the exact filling needed to preserve a tooth under any given conditions ; whilst others seem to be gold mad, persisting with that excellent material under all circumstances, sometimes with but indifferent results ; time, however, can alone determine the suitability even of gold in special cases.

The next filling material is a "base" metal—tin. This is by far the best stopping for cavities in teeth of a soft whitish colour, and of a chalky nature. In such cases the natural moisture of the tooth has a tendency to produce a slight oxidation which is certainly beneficial to the tooth. Whatever the cause, I have seen teeth of this class saved by the use of tin when gold has failed, though both had been put in by the same hand and that the hand of a skilful operator.

Of plastic fillings, one of the best is Hill's stopping, or gutta-percha, as it is sometimes called. It may look unsightly and appear to have absorbed the saliva to a certain extent, but on removing it I have found the teeth perfect after years of trial. Its low conductivity is greatly in its favour ; in fact, it is superior in this respect to any other filling. But great care in handling is necessary to insure success with it. It must not be overheated, but packed at just the right temperature, and care must be taken that no moisture gets into the tooth during its insertion.

Poulson's and the like compounds are the finest as regards colour and conductivity combined; they are also the only fillings that adhere to the walls of the cavity. Dentistry made a rapid stride when they were introduced. If it were possible to obtain a filling uniting these excellent qualities with the hardness of gold, and its resistance to the acids of the mouth, we should find ourselves in possession of a perfect material.

Amalgam is a very indefinite term; it conceals much. Yet a good amalgam has certainly a place in dentistry. If the right tooth be chosen and filled with care, excellent results can be obtained. In order to avoid staining the tooth, the cavity should first be lined with a sheet of platinum. In using any metal filling, a non-conducting material should be placed between it and the pulp; "Poulson" serves the purpose well.

With the above mentioned fillings at his command, and care in adapting them to the case in hand, the dentist may fairly hope to be successful in saving teeth. But one necessary caution must be added. I have known some of the very best fillings to fail because the operator did not clean the teeth, or urge upon the patient the necessity for so doing. Every cavity has been duly filled, but the tartar has been left to work its insidious way round the neck of the tooth and to eventually loosen it.

Finding ourselves in possession of the materials, we have next to determine their selection and adaptation in a given case. Good strong teeth: *i.e.*, those which are well supplied with what is necessary for tooth structure, if they be decayed, can be preserved by being WELL filled with *Gold*.

But the teeth that need the most attention are those of an inferior quality; on these the dentist is called upon to exert his utmost knowledge and skill, and after doing that often fails for lack of knowing the true cause of decay. Many teeth which have come under my care have appeared to be almost past saving; but after having treated them with the various remedies we have in our surgeries, they will take a plastic filling.

Many teeth are too tender to allow cutting away for a metal filling; a "Poulson" filling will save such teeth.

Again, there are teeth with plenty of retention, but the nerve almost exposed, causing the patient great pain. In such cases the pulp may be often saved and pain alleviated by mixing a little of the "Poulson" powder with carbolid acid or creosote into a thick paste, and covering the nerve with it, and then filling upon that.

In the case of dead teeth I have used iodoform and eucalyptus oil with encouraging success. At the same time I do not profess, as some dentists do, to save *all* dead teeth. If any dentist is really in possession of so valuable a secret, it would be worth one's while to serve under him as a pupil for a year or so, and to pay him a handsome premium.

Then again, I have heard a dentist make the statement that he never extracts a tooth, that there is no necessity for doing so. I should class him with the surgeons who never amputate because every limb can be saved, and the physician who never lost a patient because death can always be averted.

I think it most desirable that dentists should avoid "hobbies," whether as regards the filling to be used, or the circumstances under which it should be applied. No one stopping, and no one method of using it can succeed under all circumstances, any more than a physician can successfully make a "hobby" of one prescription. It is reserved for the Patent medicines one sees advertised to cure all diseases under all conceivable circumstances, and we may be well content to leave their proprietors in undisturbed possession of their vain-glorious boasting. The dentist should keep himself unbiased by preconceived notions, ready to avail himself of improved materials, or to adopt improved methods.

I have already indicated in this paper my belief that we have yet to wait for a satisfactory theory of decay, and I do not suppose that the materials now available for filling have exhausted the possibilities of the case, or that the methods of applying those materials are susceptible of no further improvement.

While many of us are called upon to devote our whole time to the practical application of our knowledge, it ought not to be impossible for dental surgery to find men such as other professions have found, who will devote themselves wholly to the study of the questions I have noted and thus extend the borders of our knowledge. We might hope to learn from them the methods by which we could arrest decay, and should gladly receive from them the means of saving teeth whose condition we are now compelled to look upon as hopeless.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Edinburgh Dental Hospital and School.

A MEETING of the governors and friends of this institution was held at 30, Chambers Street, Edinburgh, on Monday, July the 24th, for the presentation of prizes to the students, and for the transaction of other business; the Rev. Dr. SANDFORD occupied the chair.

The Dean (Mr. W. BOWMAN MACLEOD), made his report of the progress of the school during the past year. He was happy to be able to state that the institution had prospered to an extent which equalled, if it did not exceed, the most sanguine expectations of its promoters. The number of their students, if not large in comparison with the purely medical schools, which had for their object the training for a larger and wider profession, and also the advantage of an older organization, was gradually increasing, and was in excess of what might have been expected at so early a period of the hospital's existence. He was happy, also, to be able to speak most highly of the diligence and aptitude displayed by the students. Not only had they worked well in their own special departments, but they had distinguished themselves in competition with their medical *confères*. Thus at the end of the Winter Session, James Graham Munro gained the first prize in the general Physiology class; the man who came next to him being an M.B. and C.M. of Oxford. In the Senior Anatomy class the second prize was taken by David Dewar Hepburn, a son of one of their most esteemed citizens. Had it not been for an unfortunate mistake as to the date of the examination, there was every likelihood that Mr. Hepburn would have taken the first place. In the junior Anatomy class the first place had been taken by a dental student, Mr. James Johnston, the third by Mr. James Graham Munro, and the fourth by Mr. John T. Hughes. In the Chemistry class Messrs. Munro, Hughes, and Johnston were placed above all the medical students.

The special work of the hospital had not been neglected. Thus, during the six months, January to June of this year, they had executed 253 stoppings—70 in gold, 143 in alloy, and 37 in white plastic mediums, besides other general treatment of the teeth, instruction in the use of anæsthetics, &c.

During the summer session he (the Dean), had offered two

prizes to be awarded for regularity of attendance, politeness of demeanour, attention to patients, and general proficiency in operating. Of these the senior had been awarded to Joseph Smithson Thomson, and the junior to James Graham Munro. These prizes would be supplied in future from a fund which had been raised amongst the Edinburgh licentiates. At the close of the next session five prizes would be given, viz., one each for proficiency in dental anatomy, dental physiology, and dental mechanics, in addition to the two, already mentioned, given for general operative skill. Mr. Macleod concluded by saying that he considered the future prospects of the school to be most promising.

On the motion of Mr. WILSON, a hearty vote of thanks was given to Mr. Macleod for his valuable services in connection with the school.

It was then moved by Mr. MACLEOD, seconded by Dr. JOHN SMITH, and unanimously agreed to, that Dr. Joseph Bell be appointed hon. consulting surgeon to the hospital, in the place of the late Professor Spence. The prizes given by Mr. Macleod, consisting of a handsome silver medal for the senior and a set of instruments for the junior, were then presented to Messrs. J. S. Thomson and J. G. Munro, respectively.

The Chairman then delivered an excellent address to the students, and the proceedings terminated with the usual vote of thanks.

The General Medical Council.

The following statement of the "Receipts and Expenditure of the Dental Registration Fund for the year ending January 1st, 1882," was laid before the Council on Thursday, June 29th, by Dr. Quain, the Chairman of the Finance Committee. It forms "Table D" of the "Returns to both Houses of Parliament, made pursuant to section XXXIII. of the Dentists' Act." The Committee, in their report, say with regard to it :—"Table D shows the receipts and expenditure of the Dental Registration Fund for the year ending January 1st, 1882. In the receipts, £690 16s. 2d., it will be noticed that there is an increase of £74 8s. 11d. over those of last year, whilst the expenditure, £1148 7s. 3d., has been less by the sum of £660 3s. 4d., leaving the deficiency of income for the year, £457 11s. 1d., compared with a deficiency of £1192 3s. 4d. in 1880."

Receipts and Expenditure of the Dental Registration Fund during the Year 1881.

RECEIPTS.		£	s.	d.	EXPENDITURE.		£	s.	d.
BALANCE, Jan. 1, 1881 ...	...	9824	8	11	GENERAL COUNCIL'S FEES AND OTHER EXPENSES...		294	0	0
Amount (to be deducted) repaid to					EXECUTIVE COMMITTEE'S FEES & OTHER EXPENSES		150	17	0
ENGLISH BRANCH COUNCIL ...	...	527	10	11	GENERAL EXPENSES (House-Expenses, Salaries, &c.)		462	17	1
					PRINTING ...		...	...	...
							193	17	5
REGISTRATION-FEES :—					MISCELLANEOUS EXPENSES :—				
66 Registration-Fees at £5 each...	...	330	0	0	Auditors' Fees ...		...	10	10
202 Registration-Fees at 5s. each...	...	50	10	0	Additional Clerical and other Assistance		...	17	18
					Expenses at General Council's Session		...	18	5
					Bank Charges ...		...	0	1
SALE OF PUBLICATIONS ..	...	...	...	...			...	...	...
							46	15	9
DIVIDENDS :—					BALANCES :—				
One year's Dividend on £9281 15s. 3d.					Cost of £9,281 15s. 3d. New Three per		9000	0	0
of New Three per Cents. (less In-					Cent. Stock ...		273	19	4
come Tax) ...	...	...	...	...	Amount in Bank on January 1st, 1882		...	...	...
							9273	19	4
					Amount (to be deducted) due to		434	12	5
					ENGLISH BRANCH COUNCIL ...		...	...	...
							8839	6	11
							£9987	14	2
Andited and found correct.									
QUILTER, BALL, CROSBIE, GLEGG, & WELTON.					Signed {				
January 10th, 1882.					RICHARD QUAIN, M.D.				
					HENRY A. PITMAN, M.D.				
					W. J. C. MILLER, B.A.				
					Treasurers.				
					Registrar.				

ANNOTATIONS.

AMONGST the improvements which must be instituted at the next Annual General Meeting of the Association will be some plan for obtaining an accurate list of the names of the Members attending the gathering. The plan of "voluntary inscription" followed at Liverpool was not altogether a success. Some Members omitted to enter their names at all on the papers provided for that purpose; others entered theirs on the list of visitors, and some of the visitors signed amongst the Members, whilst some of the signatures thus obtained are quite illegible. Members were requested to return their cards of admission to the Secretary, but only about a third of those present did so; and of the cards received, from which it was hoped a list might be made, a considerable number were useless for this purpose, as the space for the member's name had not been filled in.

At the Annual Meetings of the British Medical Association this part of the proceedings is managed very simply and easily. Instead of tickets being sent out to Members generally, each individual, soon after his arrival at the town in which the meeting is to be held, repairs to some appointed place at which the local Secretary, or other member of the Reception Committee, is waiting to receive him. He there enters his name on a list of the Members in attendance, receives his tickets for meetings, dinner, &c., and obtains any local information of which he may be in need. But then the British Medical Association has just carried out its fiftieth annual meeting, so it may well be supposed that matters of this sort have been thoroughly systematised.

So far as we can tell at present, between ninety and a hundred Members attended at our first provincial gathering, whilst about thirty visitors were in regular attendance at the meetings as holders of complimentary tickets. This does not include those, chiefly medical, visitors who only attended one, or a part of one meeting. Amongst the visitors—most of whom, as might be expected, hail from Liverpool, Manchester, and neighbourhood—we find the names of Messrs. J. W. Lloyd, R. Walker, F. W. Carson, W. Forester, W. H. Jewitt, W. B. Burrows, Thomas Hall, F. G. H. Nicholson, Walter Harrison, Arthur King, F. Matthews, T. Mus-

pratt Hall, W. Helyar, J. N. P. Newton, W. H. Stewart, W. A. Wilson, J. Battersby, J. S. Dicken, J. Healy, R. W. Chrystie, H. P. Newman, H. J. Warrington, F. J. Baily, K. E. O'Duffy, F. T. Paul, &c.

IN preparing the reports of these Meetings for the pages of the *Journal*, no part of the proceedings gives the Editor more trouble than "The Dinner." The Royal Family, the Army and Navy, the Lords and Commons, have to be most unceremoniously treated; carefully-planned orations have to be ruthlessly cut down, and most of the wit and humour relentlessly excised. It must be remembered that what is very amusing and quite in place in an after-dinner speech, would be very much out of place, and even read very flat, in the pages of a scientific journal. But it may certainly be said that the speeches at Liverpool were much above the average of such productions. We have given to the Dinner as much space as we could possibly afford, and have used the editorial shears with some degree of unwillingness. We are sorry we could not do justice to Mr. Oakley Coles' Comic History of Liverpool. Mr. Edgar Browne's speech was most humorous from beginning to end, the President contributed his quota to the amusement of the company, and the rest of the speakers, without exception, acquitted themselves well.

It will be seen that Mr. Campion, like ourselves, is not very favourably disposed towards dinners, and recommends that they should be indulged in more sparingly. Well, dinners are troublesome things to put into type, yet we are not without some belief in their usefulness, and, if dinners are to be dispensed with, we should be inclined to say, Do away with the mid-day one. It may seem ungracious to criticise hospitality, yet we should be sorry to see the plan which has been sometimes followed, of an elaborate champagne luncheon, given by the President, become a recognised custom. It not only takes up a good deal of time when the day is generally found too short for the business to be got through, and is not the very best preparation for an afternoon to be devoted to the discussion of scientific subjects, but it might sometimes form a heavy tax on an individual, and might so operate as to deprive a Branch of the services of one who would be, in every other respect but the possession of worldly means, a most

eligible President. Englishmen, it has been said can do nothing without a dinner, and if it is decided that Members shall go home to tea, as Mr. Campion seems to think they should, we fear the mid-day meal will become more of a dinner than ever.

THE Annual Meeting of the "American Dental Society of Europe," took place at Ostend on the 7th ult., under the presidency of Dr. W. St. George Elliott, of London. Amongst those present were Dr. B. Cohen, of Hamburg, Vice-President, Dr. W. D. Miller, of Berlin, Secretary, Dr. C. V. du Bouchet, of Paris, and Drs. Charles Jenkins, of Dresden, Fay, of Brussels, Coffin, of London, Rosenthal, of Liège, Walker, of London, and several others. Dr. Elliott delivered a most excellent address, in which, however, he stated that no less than 75 per cent. of his English patients suffered from a modified form of Riggs' disease. He afterwards read a paper on "System as applicable to instruments and books," which was by no means the least instructive of those on the agenda paper. A very interesting paper on the "Agency of Micro-organisms in the production of Dental Caries," was read by Dr. W. D. Miller. Dr. W. Sachs gave his opinion of the value of Iodoform as a dental remedy, utterly condemning it; and other papers were read by Drs. du Bouchet, Patton and de Trey. We regret that space will not allow us to give a fuller account of the proceedings.

ONE has seldom any need to look at the title of a journal in order to find out whether it is American or English, a glance down a page is sufficient. The following extract from a first class American periodical, the *Ohio State Journal of Dental Science*, is amusing and there is no harm in it, yet one would be surprised to see it in an English journal of the same standing:—

"Whether mercurials are directly aperient or not has been a matter of dispute. Professor Flagg is the most thoroughly mercurialized man we know; and just look into the July number of the *Dental Cosmos* and see what a diarrhoea of words he has. He had a similar attack once in Cincinnati, when he was going to whisper a plastic gold filling into a tooth in less than two minutes. Some pathologists claim that diarrhoea and constipation may be co-existent. It seems so—a diarrhoea of words and a constipation of ideas, you know. The condition is regarded as incurable."

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—In the *Cosmos* for August last, Dr. Bonwill, of Philadelphia, U.S., gives an elaborate description of his amalgam and how to mix it, and states at p. 424, "the treatment of gold with mercury is, I believe, new." I beg to inform him through the medium of your Journal that it is not new, since you will see from the enclosed extract from the *Pharmaceutical Journal* for March 1st, 1850 (Vol. IX., p. 404), that the use of amalgams of gold and mercury was known to the dental profession thirty-two years ago.

I am, Sir, yours faithfully,

E. GREGORY, M.D., D.D.S., L.D.S.

. In the extract referred to precise directions are given for making and using an amalgam composed of one part of gold to three of mercury, but as few dentists' would think of looking through the volumes of the *Pharmaceutical Journal* in search of dental formulæ, we are not surprised that Dr. Bonwill should have been ignorant of the existence of this one.—ED.

J. E. RICHARDSON, L.D.S.I. has been appointed Honorary Dental Surgeon to the Derby Amalgamated Friendly Societies' Medical Association.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

A good deal of trouble and delay would be avoided if Correspondents would pay more attention to the notices which appear at the end of each number. All Correspondence for the Editor, Contributions for the Journal, Books for review and Exchange Journals, should be addressed to 40, Leicester Square, London, W.C.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. X.

OCTOBER 14, 1882.

VOL. III.

The Royal Commission on Medical Acts.

THE evidence on Dental questions given before the Royal Commission on Medical Acts, and printed in a subsequent page, will be read with close attention by those members of our branch of the Medical Profession who are interested in Dental Surgery as a practice or as an art and science ; those who, apart from personal interest, think its practice eminently useful and worthy of the attention of educated men. To such readers the opinions expressed in the two short paragraphs in the Report of the Commissioners relating to Dental questions only, will appear consistent with the evidence. A good case was made out in favour of placing Dental Representatives on the Medical Council ; but a stronger case was established by the general evidence in support of lessening the present number of Councillors ; and in the special evidence it was shown that reliable dental evidence could be obtained from the Dental Boards

of the respective Surgical Colleges; a course which the Council lately followed when information was required in respect of Dental Apprenticeships. The claim has been set forth and placed in the customary public record,—a blue book,—for future use, and with this acknowledgment we may, for the present, be well content.

But what the Commissioners in their Report do say on Dental matters is of less importance than that which they do not say. The Dentists Act was before them as part of the Executive business of the Medical Council. Attention was drawn to it by the several witnesses who were examined on dental questions, and their opinion as to its efficiency was elicited by direct questions. Furthermore, Section 28 of the Dentists' Act provides that any arrangement that shall at any time be made for conducting Medical Examinations, by a conjoint Board or otherwise, shall apply equally to the conducting of Dental Examinations, and that "one-half of the Examiners at any such Examination shall be persons registered under the Dentists Act." Hence, those parts of the Report which relate to examinations, to educational control, and to the organisations of the Examining Boards, are strongly interesting to the dental practitioner. The Commissioners do not suggest any change in the Dentists Act, or in its relations to the Medical Council, and it is presumable, therefore, that they saw no cause for change. The consent of silence is the more impressive on account of the course taken by Dr. Quain, who, on being asked by the Chairman, "Is there anything further that you wish to mention to the Commission?"—suggested amendments in the Dentists Act which, if adopted, would go far to separate Dental from General Surgery, and thereby to lower the position of dental practitioners. The suggestions are put forward under the support of statements respecting the promoters and the drafting of

the Dentists Act, which are, by the Minutes of the Medical Council, shown to be altogether incorrect. He says the Dentists have chosen to adopt the Medical Act of 1858 as a model. Now, the Bill as it passed the House of Commons consisted of ten pages. The Government, in the House of Lords, struck out upwards of two pages, and substituted amendments, which, as printed by order of the House of Commons, amounted to no less than eleven pages. The Bill, amended in conformity with the suggestions of the Medical Council, was lengthened from ten pages to sixteen, upwards of eight pages of which consisted of amendments which the Dentists were powerless to resist, and whereby the Act became the Act of the Medical Council rather than of the Dentists. But we need not go further into the misapprehensions and misstatements of Dr. Quain. It is enough for us that they have been disregarded by the Commissioners.

Whatever trouble the amendments may have occasioned in a first registration, or whatever misfortunes in respect to the registration may have arisen from the insufficient or unpractised judicial capabilities of the Council, we have yet to thank the Council and the Government for Clause 28 of the Dentists Act, in the framing of which the Dentists took no part; for by this important clause the present position of Dental Surgery, as a recognised branch of surgical knowledge and practice, will be preserved, whatever legislative change the latter may undergo, and the joint education of the special and general practitioners through the greater part of their respective courses will be thereby maintained.

On a future occasion we purpose giving an abstract of those portions of the Commissioners' Report which, if carried into effect, will affect the constitution of the Dental Boards of the Colleges of Surgeons.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting at Liverpool.*Friday, August 25th.*—AFTERNOON MEETING.

THE Members having re-assembled at 3 o'clock,

Mr. C. S. TOMES, F.R.S., read a paper on "Some of the Scientific Problems of Dental Surgery," which will appear in an early number of this Journal.

Captain NEWMAN (Liverpool) moved, and Mr. D. WORMALD (Bury) seconded, a vote of thanks to Mr. Tomes for his able and interesting paper, and the motion was carried unanimously.

Mr. COLEMAN said he hoped such a valuable paper would not pass without a discussion.

The PRESIDENT said it was not contemplated that there should be any discussion on this paper. It was intended that it should be simply an address, and the arrangements were such that he thought they would have no time to discuss it. If they were to stay to do so, they would not be able to get through the work of the day.

Mr. W. BOWMAN MACLEOD (Edinburgh) then read a paper on "Mechanical Dentistry: its Prospects and Probabilities," which we shall publish on the first opportunity.

The PRESIDENT said he was sure they were all anxious to return their thanks to Mr. Macleod for his very interesting paper, and he thought they would carry it by acclamation, and save him the trouble of putting it to the meeting.

Mr. COLEMAN next read the following communication:—

Cases of Dead Teeth treated by an Antiseptic Process.

In a recent article in the *Dental Cosmos* on my "Dental Surgery and Pathology," the reviewer, speaking of the treatment of dead teeth by arsenious acid remarks, "This we venture to predict will never become a favourite plan of treatment."

With regard to the review itself I have here, of course, no concern, my present object being only to bring before my professional brethren the results of a method of treatment, which, so far as I know, originated with myself, and which will, I believe, be found to surpass any at present in use for the cases in which I advocate its employment.

Such cases may be briefly described as teeth in which the whole, or nearly the whole, of the dental pulp has lost its vitality, and where the adjacent dentine, either through decomposition of the contents of the dentinal tubuli, or saturation with septic fluids from the decomposed pulp, has become putrid and offensive, and, according to the degree of its putrescence, coupled with the state of health of the individual, more or less affects the cementum and its contiguous vascular membrane.

Cases are not unfrequently met with in practice where, after the removal of the softened dentine in a carious tooth, we come upon a dark spot, situated in the direction of the pulp cavity, and at which spot a fine probe will pass into the pulp cavity, and yields on its removal a most offensive odour, too well known to the dental practitioner. Equally frequent, perhaps, are the cases where the same condition prevails upon the removal of a filling—an amalgam especially—which has been for a long time defective, and where decay has progressed behind it.

In many of the above cases we find there has been but little pain, although in a large proportion we find there has been some tenderness when the functions of such teeth have been unduly exercised. To fill such teeth immediately is, we know, to determine a series of symptoms most disastrous to the well-being of the patient, whilst to bring the tooth into the condition in which filling can be safely carried out is usually a very tedious process. It is true that a large proportion of these cases may be treated, and with moderate success, in a very simple manner, viz., by leaving in the filling, or making through the tooth itself, a small vent for the exit of discharge. Teeth thus treated are, however, somewhat liable to attacks of periodontitis, and my experience of the method would lead me to say that about five years will be the average duration of a stopping so conducted. Much, however, will depend upon the manner in which the operation is carried out, one point essential to success being the fineness of the duct. A large opening invariably gets choked up, as well as admits particles of food. It is, I believe, impossible to institute too fine a one, but so that it is actually patent.

The process I then recommend for the generality of such cases I have thus carried out. After removing all the softened dentine and the contents of the pulp cavity, but not those of the fangs, and well syringing and drying, carbolic acid on cotton is placed in the pulp cavity, and left there for a few minutes, the time generally

occupied whilst preparing the filling. This latter being made ready, the carbolic acid is then removed, and the cavity again dried, and over the fang cavity or cavities, as the case may be, is placed a small disc of stout writing paper moistened with carbolic acid, on one side of which has been taken up the 20th to the 15th of a grain of arsenic, this side being applied to the fang cavity. Over this zinc-oxychloride, as usually mixed for a filling, is placed, about as much as nearly or quite fills up the pulp-cavity—and when this has set the remainder of the cavity may be filled with any suitable filling. In the case of molars, and where it may be supposed there is any possibility of a second application of arsenic being necessary, I fill temporarily with gutta-percha.

I now proceed to give the cases I thus treated in the year 1880. My reasons for selecting this year especially are: firstly, that during it I saw comparatively a very small number of private patients, which all these cases were. Secondly, that a large proportion of these patients were friends and neighbours, whose cases could be followed up without difficulty, and, thirdly, that during that time and since I have been able to keep more accurate notes of all my cases.

	Tooth.	Surface.	Result.
1880.			
March 31....Mrs. J. ....adult ...up. right canine ...posterior...			satisfactory.
April 13 .....Miss B. ... ditto ... ditto ... ditto ... ditto			
April 21.....Mrs. J. ditto ... up. left canine ... ditto ...			This tooth had been filled three times previously, after lengthened dressing, but fillings had to be removed. Slight discharge from pulp cavity, and slight tenderness on percussion; wished to have it removed, certainly not stopped, from pain previously experienced. As seen a short time ago, it was perfectly free from pain since period of filling, not at all tender on percussion, and very serviceable.
June 7 ...Mr. B. ....adult... up. left 1 molar ...Anterior...			Tooth previously filled with gold, cavity at side, considerable discharge; treated as described, with temporary gutta percha filling.
June 14 .....Mr. B. (the above) ditto ... ditto ...			Filling removed to see condition; pulp cavity sweet; process repeated with permanent filling.
July 19 .....Mrs. A. ....adult...low. 1. left bicusp.. posterior...			satisfactory.
July 20 .....Mr. De L.... ditto ... up. left 1 bicusp.... ditto ...			satisfactory.
August 7...Mr. T. ....ditto ... up. right 2 molar... mast. ...			This tooth had been thus treated two years previously and completed with zinc-oxychloride, which was giving way. On removal, pulp cavity perfectly sweet; filled permanently.
Nov. 1 ....Mr. D. ....adult... up. right canine ... ditto ...			This patient

returned on August 9th, 1881, complaining of pain in region of this tooth.

Filling removed, pulp cavity sweet, tooth free from tenderness on percussion, refilled, pain disappeared on tonic treatment. Patient's conclusion was that tooth was not the cause of pain.

		Tooth.	Surface.	Result.
Dec. 4	.....Miss McF.....adult ...	up. left lateral ...	mesial ...	satisfactory.
Dec. 14	.....Master B. ....youth...	up. 1 left molar ...	mast. ...	ditto
Dec. 18	.....Master F..... ditto ...	up. left canine ...	posterior...	ditto

In addition to the above I relate two cases occurring later on, on account of the interest they present.

1881.

March 1. ... Mr. T. adult...low. 1 right bicusp.. ditto ... Tooth loose, very tender to pressure, surrounding gum swollen and inflamed. Treated by this method it became perfectly serviceable and free from tenderness in less than two weeks.

1882.

April 12.....Miss V. adult...up. 1 left molar ... anterior... Tooth filled with gold, large filling and excellently carried out; considerable swelling in the palate; gumboils of large size over roots of external fangs, portion of stopping drilled out, considerable discharge from fang cavities, treated with arsenic twice, no change for better or worse. Dressed weekly for eleven weeks with dressing chiefly composed of eucalyptus oil, at last visit filled with fine hole for outlet of discharge, abscesses had almost entirely disappeared. This case is given as one in which treatment by arsenic was of no service. Such cases are no doubt much better treated by such applications as eucalyptus oil, or creosote and iodine often repeated, perhaps also iodoform, but of this latter I have had no experience.

Of all known substances which arrest the decomposition of animal matters, arsenious acid probably stands at the head. The preservers of skins of birds and animals have as yet found nothing to surpass it, and it is still, I believe, the most important ingredient in the injection fluids for subjects for dissection; its compounds with albuminous substances being of so stable a character. I am aware that a prejudice exists against its employment on the ground of its being such a highly poisonous substance, but if only ordinary precautions be exercised when employing it, I do not believe any harm will ever ensue. It is now certainly more than ten years since I accidentally hit upon its use for the cases I have described, and although I have thus largely used it, and often in the case of young children, I have never met with a single instance in which I could trace to its employment the slightest injurious result. In the latter cases I have employed it for the prevention or cure of intractable gum boil, in many cases with complete success, in almost all with considerable mitigation of the symptoms.

The PRESIDENT, after thanking Mr. Coleman, on behalf of the meeting for having brought forward the subject, said that his experience had not been very large, but in his own practice he had left arsenic dressing in a tooth for several weeks without producing any injurious effect.

Mr. GADDES said that as to the arsenic not affecting the vessels beyond the pulp cavity, he believed that in a paper read at the Dental Congress, last year, giving the results of experiments made on dogs—exposing the pulps of teeth and treating them with arsenious acid—the writer stated that in the majority of cases he had found periostitis resulting, which he attributed to the arsenic passing through the foramen. With regard to the title of the paper he objected to the term “dead” being applied to a tooth in which the pulp was dead. He thought they must all recognise that the tooth was not dead under such circumstances. At all events it was not in a necrosed condition, similar to the condition of bone which was necrosed, inasmuch as the tooth was tolerated by the system, whereas a piece of dead or necrosed bone was exfoliated; and if they were to aid in the attempt to advance the scientific status of their profession they could not be too particular about the accuracy of their language.

Mr. COLEMAN said that, perhaps, no one felt more than himself the inapplicability of the term “dead teeth” in these cases. He had always, in teaching and in writing, pointed out that one must not look upon a tooth as a dead tooth even when a certain portion was in a necrosed state, any more than a man could be said to be dead if he had a necrosed tibia or fibula. He should be glad if they could get some term which would relieve them from speaking of a tooth in this state as dead, whilst a portion of the periosteum retained its vitality.

Mr. GADDES said he could only suggest that where the pulp was dead, they should be termed “pulpless” teeth.

Mr. COLEMAN:—No; they are not “pulpless,” because the pulp is there.

Mr. CRAPPER, of Hanley, then read the following communication with reference to the proposed establishment of a Benevolent Fund:—

MR. PRESIDENT AND GENTLEMEN—Those of you who were present at the meeting of the Midland Counties Branch of the British Dental Association, at Leeds, in April last, may remember that I then brought forward certain suggestions respecting the

formation of a Benevolent Fund in relation to our profession, and I am glad to know the interest felt on the subject justifies me in again calling attention to it. As I mentioned at Leeds every institution formed for social or defensive purposes invariably has some such fund. I also pointed out what I conceived to be cogent reasons why such a fund should be established in connection with our Association. It is unnecessary for me to recapitulate or add much to what I then introduced, but I desire to mention that in a recent issue of the Journal of this Association, Mr. Henry Blandy forcibly supported the views which I had previously introduced as to the desirableness of having such a fund. Mr. Blandy also supplied a few suggestions which may well form the basis of a code of rules for its management. Briefly stated they are as follows:—

1st.—That every person seeking benefit from the fund must be, or have been, a regular subscribing member of the British Dental Association, or be the wife or orphan of such an one.

2nd.—That he shall have subscribed to the Benevolent Fund for two years at least.

3rd.—That he shall satisfy a Committee by local testimony that his distress arises from no disgraceful conduct or habits of his own.

4th.—That on these lines there might be scales of relief for dentists or their dependents.

5th.—That the name of the applicant need not go beyond a Committee of three, who after full inquiry might dispense relief most effectively and unobtrusively.

I have also received valuable suggestions from several gentlemen, and my earnest hope is that others will express their opinions as to the basis upon which the fund should be founded, so that if practicable a small Committee may be appointed to formulate the requisite rules and take steps for giving the fund a fair start.

Mr. Blandy makes a further valuable suggestion, viz., that help may sometimes be given better by voting an orphan into a school than by any other means, and suggests utilising interest in Masonic circles for that purpose. As a Life-Governor of the Masonic Charities, in all of which I take a deep interest, I most thoroughly coincide with this view, and I would also suggest that the Benevolent Fund for aged and distressed Freemasons could be dealt with in a similar manner to any distressed member of our Association who should also be a Freemason. As a practical

means of obtaining the best and most workable code of rules it would be advisable to obtain the rules from the Secretaries of all Medical Benevolent Funds, and, so to speak, build the superstructure of our charity on the foundations most laboriously constructed and found to be most satisfactory by them. By this means our labours would be immensely lightened, our expenses lessened, and the efficacy of our undertaking assured.

The CHAIRMAN said he believed he was correct in saying that a Committee was formed two years ago for the purpose of considering this matter. The Committee, after giving it a great deal of consideration, sent in a report, and a resolution on the subject had been passed that morning by the Representative Board.

The SECRETARY said he thought it was right to bring before the meeting the fact that as far back as April, 1879, a Committee was appointed to consider the formation of a Benevolent Fund, and made the following preliminary report :—

Extract from Minutes of Representative Board, April 28th, 1879.—

“Mr. Underwood proposed and Mr. Vasey seconded—‘That Mr. Dennant and Mr. Sims be requested to organize the Benevolent Scheme to be promoted by the Association.’”

Extracts from Minutes of Representative Board, June, 1879.—

“Report of the Sub-Committee on the formation of a Benevolent Fund.

“The preliminary report, by Messrs. Dennant and Sims, was read as follows :—

“Before presenting a detailed scheme for a Benevolent Fund, your Committee would solicit a declaration of opinion from the Board as to the principles upon which the fund is to be established. They are prepared, however, to recommend a scheme of extended scope and usefulness analogous to those societies found to work so admirably in the medical and legal professions. They recommend that the ‘objects’ shall be set forth as follows :—

“(A). To afford promptly, privately, and without expense to the recipients, *immediate* pecuniary relief by donations and annuities, *first* to necessitous subscribers being members of the profession, their widows and orphans ; and, *secondly*, to such necessitous persons as are, or have been Dentists, and have not been subscribers, and who in the opinion of the Executive may be deserving objects, and the widows and

orphans of deceased Dentists, who were not members of the society at the time of their decease.

"(B). To assist orphans where practicable towards qualifying them to earn their own independence.

"They further recommended that the annual subscription should be one guinea, payable in advance.

"The 'Medical Benevolent Fund,' and 'Solicitors' Benevolent Association,' exist as isolated institutions, and your Sub-Committee are of opinion that while the Dental Association establishes the Benevolent Fund it should not (save in the most temporary manner) control its management, but that as soon as possible, for local and other reasons, it should have the exclusive management of its own affairs.

"After some discussion this report was ordered to be entered on the Minutes of the Board, and to stand over for future consideration.

"A hearty vote of thanks was awarded to Messrs. Dennant and Sims for the great interest they had shown in, and the labour they had bestowed on, the business entrusted to them."

Extract from Minutes of Representative Board, October 27th, 1879.—

"On the motion of Mr. Dennant, it was resolved that Messrs. Saunders, Woodhouse, Coleman and T. A. Rogers, be added to the Benevolent Fund Sub-Committee, and that the said Committee be requested to prepare a report upon the subject for presentation to the first General Meeting of the Association."

At the Meeting of the Representative Board that morning, several gentlemen, impressed with the necessity of doing something of the kind, and referring to the paper read by Mr. Crapper at the meeting of the Midland Branch, at Leeds, two or three months ago, urged upon the Board the advisability, now that the Association had assumed more consistency than it had before, of at once trying to carry out the views suggested in the report, and a Committee was accordingly formed. He was sure that Mr. Crapper would be glad to hear that such a step had been taken.

A MEMBER asked for the names of the Committee to be read, and also whether the Committee was instructed to gather information, and report to the annual meeting?

The SECRETARY read the names of the Committee as follows—Messrs. E. Saunders, A. J. Woodhouse, T. A. Rogers, S. Lee Rymer, J. Dennant, C. Sims, R. Rogers and Dr. Waite, and said he supposed it would be for them to report—when there was anything to report—to the Representative Board.

A MEMBER thought the matter was one which might very well be left in the hands of the Representative Board. It was very well that a stimulus should be applied by Mr. Crapper or any other gentleman who felt an interest in the subject, but he did not think they had yet got into the position that they could successfully establish such a fund.

Mr. CRAPPER said he should not wish it to be done in any other way than through the Representative Board, but he thought that this was one of the things that was calculated to be of benefit to the Association by uniting the profession. It had done good to the medical profession, and it might be of great practical benefit to the dental profession.

The SECRETARY said he was sorry he had not all his papers with him, so that he could have answered the question as to when the Committee was expected to report, but he was sure that Mr. Rymer's resolution was quite sufficient to guide any Committee in its movements. It was to the effect that the Committee should report to the Representative Board, or to the General Meeting twelve months hence, if it liked. He might state that he had received a letter from Mr. Huet of Manchester, expressing his sympathy with the project and promising, under certain conditions, a contribution of ten guineas.

Mr. Frederick Canton read the following communication :—

Mr. PRESIDENT AND GENTLEMEN,—With your permission I will read the notes of an interesting case of neuralgia which came under my care at the Dental Hospital of London in November, 1880.

Previous History of Patient.—C. E., age 72, in early life was a sailor, afterwards employed in a prison, and now retired. Never had any serious illness. Father and mother were both very healthy, and never suffered from any serious illness; only had one sister, and she died at an old age. About eighteen months before being seen was first attacked with neuralgic pain in the right side of the upper jaw, about the place where second molar would be, pain lasting three or four seconds; this continued at intervals for three or four months, after which he became entirely free from pain.

Present Condition, November 1st, 1880.—To all appearance a very healthy old man, appetite good, suffers slightly from indigestion. Upper and lower jaws entirely edentulous. Complains of intense neuralgic pain in the upper jaw, in the same spot as attacked previously, and present attack came on five weeks ago. He now suffers night and day every three or four minutes; eating, or even opening

his mouth, bringing on an attack. Gum seems perfectly healthy everywhere. Painted gum over and around painful place with strong solution of iodine, and ordered quinine.

Nov. 8th.—No better. Gum freely lanced over the painful place, and quinine increased.

15th.—Much better; ordered to continue the same, gradually reducing quinine if possible.

22nd.—Not quite so well. Made vulcanite suction plate with the idea of protecting the part from any irritation, but on trial this did not succeed.

Dec. 20th.—Pain having returned as bad as ever, at the suggestion of Mr. Charles Tomes, instead of removing a portion of the bone as recommended by Gross, I dissected back a triangular flap of gum over the painful spot, and with a large spear-pointed drill drilled with the engine three or four holes into the bone of the jaw, replaced the gum and put in a pad of lint which he continued to press on with the lower jaw until he got home, the whole operation was done, as far as possible, antiseptically.

The result of the case has been most satisfactory, as the following letter will show, which I received in June last (eighteen months or more after the operation) in answer to one I wrote asking how he was:—

Plumstead, June 22nd, 1882.

Mr. Canton.

DEAR SIR,—In answer to your note, of the 21st, wishing to know how I have been since you performed the operation on my jaw, I beg to say that I felt very great benefit by it. I have occasionally a slight twinge, but nothing to speak of. I remember you saying that very likely I should do so. The most violent attack I ever had was about the time I came to see you.

Since the operation in December I have been pretty well in health, taking for my breakfast, as you advised, bread and milk. Again thanking you very much for all your kind attention to me,

I remain, dear Sir, yours respectfully,

C. E.

If time permits I would like to read an extract from Gross' Surgery referring to these particular cases, as his description of the pain exactly describes the suffering of my own case.

"There is a form of neuralgia in the jaw-bones, which, so far as my information extends, I was the first to describe in 1870, although judging from the great suffering which attends it, it has doubtless been observed by other practitioners. Its seat is in the remnants of

the alveolar process of edentulous persons, or in the alveolar structure and in the overlying gums, and it is met with chiefly, if not exclusively, in elderly subjects. It is also more common in the upper than in the lower jaw. The part affected is usually very small, often not exceeding a few lines in extent. The soft tissues around do not seem to suffer, at least not in the same degree, as is so frequently the case in the more ordinary forms of neuralgia of the jaws and face. On the contrary the morbid action is generally limited to the osseous structure. In rare instances there may possibly be some involvement of the gum, which is nearly always exceedingly hard and dense, grating more or less under the knife, and adhering with extraordinary firmness to the atrophied alveolar process beneath.

"The pain is generally paroxysmal, appearing in fits and starts, very much as in ordinary neuralgia, the slightest causes being sufficient to provoke it, as talking, mastication, the contact of hot or cold fluids, deglutition, or mental excitement. Sometimes it is momentary, coming and going with the rapidity of lightning; occasionally it lasts for hours together, and cases occur, although they are rare, in which it continues with but little mitigation for an indefinite period. The pain varies in character. Thus it may be sharp and darting, dull, heavy, aching, boring, or gnawing. Pressure generally relieves rather than aggravates it. Now and then, when it is uncommonly severe, there may be more or less spasm of the muscles of the face, but this is rare.

"The pathology of the affection seems to be compression of the minute nerves distributed through the wasted alveolar process, dependent upon the encroachment of osseous matter upon the walls of the canals in which they are naturally enclosed. In the normal state the nervous current passes along without hindrance, but in this condition of the canals its transmission is interrupted, and more or less pain, known as neuralgic, is the consequence. That this explanation is true does not, I think, admit of any reasonable doubt. The osseous structure, as previously stated, is always uncommonly hard from the deposit of new substance, which imparts to it almost an ivory-like consistence.

"The disease usually comes on gradually, and proceeds from bad to worse, until, in many cases, the suffering is rendered nearly intolerable. The general health, at first unaffected, is eventually materially impaired; the appetite is deranged; the countenance wears an anxious expression; the sleep is disturbed and un-

refreshing; the bowels are habitually constipated; digestion is imperfectly performed; the extremities are almost constantly cold, and there is terrible depression of spirits. Loss of sleep, fatigue, exposure to cold, irregularity of diet, mental distress, and, in short, whatever has a tendency to lower the vital powers is sure to aggravate the pain and prolong the paroxysms. Sometimes the disease would seem to be of a malarious origin, the attacks coming periodically very much as in intermittant fever.

"In all the cases under my charge a prompt and radical cure was affected by the free excision of the offending portions of bone with a stout knife, or with the forceps. Quinine, chalybeate tonics, arsenic and kindred articles are frequently of service in perfecting the cure."

The treatment I adopted, and the success which followed, seems to me rather to support the theory of Gross, that the pathology of the affection is owing to "compression of the minute nerves distributed through the wasted alveolar process."

This form of operation is certainly easier of performance and less formidable than removing a portion of the bone, and in such cases I should certainly advise it to be tried first.

Mr. CUNNINGHAM (Cambridge), read a communication on the subject of "The Application of Amalgam to Contour Stoppings," which we hope to be able to publish shortly.

The PRESIDENT announced that Mr. Cunningham would demonstrate the subject on the following morning at the Dental Hospital, with models and appliances.

Mr. LADMORE (Leeds), then described the mechanism of the Electric Mallet.

A MEMBER said his experience of the mallet was, that it was a beautiful instrument if brought to bear upon a solid piece of gold.

Mr. LADMORE said they must first of all put the foundation in solid, and then build upon that. Great care and experience were required in using the mallet.

Mr. GREGORY (Cheltenham) said he was in the habit of using the electric mallet frequently, and he found that if they wished to obtain a perfect result from their work with it, they must absolutely refuse to use any miscellaneous gold. If they commenced with leaf of whatever thickness, they should continue to use the same leaf to the end. He was now using Bonwill's mallet in preference to the electric. It was as nearly a perfect instrument as they could desire, and he thought that with more extensive

practice with it, they would be able to obtain more perfect results than they had done with the electric mallet.

The PRESIDENT said the time had now come for them to adjourn, and it only remained for him to remind members that next morning there would be demonstrations at the Dental Hospital, at nine o'clock, and that the meeting of the Association would be resumed at eleven.

The meeting then adjourned.

ORIGINAL COMMUNICATIONS.

The Etiology and Pathology of Dental Diseases: what we know, and what we would like to know.*

By HENRY SEWILL, M.R.C.S., L.D.S.ENG.

(Concluded from page 494.)

To sum up then, thus far, the factors in the direct causation of caries, they are, a weak point in the enamel, or retention of acid-generating agents in contact with its surface ; secondly, acids and organic products of decomposition in sufficient quantity to dissolve and disintegrate the tissues. The precise share taken by the several agents in the process of caries is one of the things we would like to know, although this item is not of supreme importance. That the acids alone do not produce all the phenomena is obvious from the fact that dentine, after perforation of the enamel, is the favourite seat of caries ; whereas acid acting alone would most rapidly attack the enamel. It is equally inconceivable that micro-organisms could gain access to the dentine without the assistance of an acid capable of perforating enamel. Three facts we may here note : first, that micro-organisms, numerous in proportion to the extent of the disease, are always present in the canals of carious dentine ; secondly, that acid generated in contiguity to the teeth, and acid conditions of the buccal secretions, hasten the commencement of caries ; and, thirdly, that simple experimental decalcification of extracted teeth by acid does not at all resemble caries, but destroys the enamel first and afterwards renders the dentine soft and elastic by removal of its earthy constituents.

* Read at the Annual General Meeting of the Association at Liverpool August 26th.

We would like to know—for at present we are uninformed—what, if any, is the influence of *leptothrix*? This fungus grows on the exterior of the teeth, or of the carious spot, but never penetrates below the surface. According to the admirable observations of Messrs. A. Underwood and Milles, the exact stages of the progress of caries are as follows. The enamel is first perforated by acid, the organisms then find their pabulum in the fibrils of the dentine and destroy them, encroaching upon the matrix; while the lime salts are dissolved out by the acid reagents derived from the organisms themselves. In this manner the more organic tissue, the dentine, is eaten away. The enamel, partly dissolved and undermined, either remains as a shell or breaks away for lack of support. The initial stage of caries undoubtedly depends greatly, if not entirely, on the action of acid; and this stage, let us note particularly, may be induced artificially by introducing a pellet of cotton wool between two teeth and allowing acid to collect in it and to act upon the adjacent enamel.

Here I must crave pardon if I turn aside for an instant to express the great obligation I am personally under to Mr. Arthur Underwood. He has given me the fullest information upon the whole of the work in which he has been engaged on this and on other subjects. No one can have the privilege of Mr. Underwood's friendship without discovering in him the true spirit of the man of science—keen in pursuit of truth, eager to submit his observations to intelligent and searching criticism, and anxious to impart knowledge to others.

With regard to the morbid anatomy of caries I will make only two more observations. The first is that the discoloration of carious dentine has never been explained. The diseased tissue is often stained to varying tints of brown, black or green. This pigmentation, I would suggest, is probably due to the presence of bacteria. It has been proved that these organisms produce pigments, and their presence in carious dentine is also demonstrated. The second observation is in regard to certain changes which apparently take place prior to actual disintegration in that portion of dentine through which the disease is advancing and which is situated immediately contiguous to the already disorganised tissue. This altered dentine in dry sections and under a low power, has a translucent appearance and forms either a regular zone, or exists in isolated patches around the walls of the cavity. The appearance was once thought to indicate invariably a

vital or pathological action, so to say an effort of nature to arrest the disease ; the tissue hardening by calcification of the dentinal fibrils similar to that which occurs as a natural phenomenon as age advances. Such a change does, perhaps, really occur in some cases, especially in slowly advancing caries in teeth of good formation, and it renders the tissue harder and able to retard the progress of decay, and even sometimes to resist it altogether. It is found, however, that a precisely similar translucent appearance is always produced during the gradual softening of dentine by acid ; and to this softening, and not to consolidation, the appearance in caries is due in the majority of instances.

The local and constitutional diseases, to which I have several times alluded, which favor the onset and progress of caries, are those, and can be those only, which are accompanied by or tend to aggravate morbid conditions of the oral mucous membrane, and those which give rise to the formation and deposit of acid in the mouth. Among the former may be enumerated all the varieties of stomatitis, among the latter phthisis,¹ scrofula, hereditary syphilis, diabetes, chlorosis, gout, chronic alcoholism, and dyspepsia. These constitutional affections exert their baneful power upon the teeth solely, I repeat, in consequence of the chronic inflammation of the gums, and the vitiation, even general acidity, of the secretions of the mouth, with which they are all so commonly accompanied. For the same reasons caries is frequently active during pregnancy. During febrile diseases, in which the secretion of saliva is scanty, and the teeth remain coated with sordes, epithelial scales, viscid mucus and other foul secretions, caries, as might be expected, is often originated ; and when previously present is always accelerated. It is very common to see the suggestion made that these effects are due to morbid influences acting upon the teeth through the general system. There is not a shadow of evidence for this statement, and all the facts can be otherwise accounted for.

If it were true we should certainly perceive simultaneous pathological changes in the pulp and other vascular connections of the teeth, such as always occur in diseases of non-vascular tissues most closely analogous in formation to enamel and dentine : but which have never been noticed in dental caries. Secondly, all diseases which promote caries are such as are accompanied by vitiation of the buccal secretions favouring the formation of acid, the direct excitant of caries. Thirdly, although there

has recently been an attempt by some German physiologists to throw doubt on the fact, we can hardly hesitate to acknowledge that the anatomical characters of enamel and dentine are such as preclude the possibility of their initiating or carrying on vital pathological action. Would any tissues capable of vital action passively submit to an operation like filling teeth, such as is daily practised with certainty?

The statements which I have striven to make clear with regard to the pathology of caries appear to furnish a very satisfactory theory of the disease. The theory is entirely based on demonstrated facts, and these are enough to account for all the phenomena. It is difficult—at least, for me—to believe that this account of the pathology of the disease should not be soon universally accepted. In the presence of incontrovertible facts, which at most need only some slight further elucidation, we should at any rate certainly do wrong to entertain seriously some of the theories which have been from time to time put forth, and which are based upon pure hypothesis or groundless speculation.

That the various classes of teeth are not equally liable to be attacked by caries, is a fact hitherto unexplained. The first point which attracts attention in the statistics gathered is the great relative frequency of caries in the six year molars; the next the much greater frequency of the disease in the front teeth of the upper than in those of the lower jaw. The latter fact may, perhaps, be accounted for by the circumstance that the lower front teeth are protected to some extent from the action of acid by the saliva with which, owing to their position, they are constantly bathed. The localisation of caries is, however, most probably determined mainly by the presence of inherent flaws in the affected teeth, but we would like to know whether this is a fact, and if so why certain classes of teeth should be more than others the seat of these defects.

With rare exceptions, caries, unless checked by art, having once attacked a tooth, progresses with greater or less rapidity until the tooth is destroyed. In its progress there comes a time when the pulp chamber is laid open, and the pulp exposed to the atmosphere and other sources of irritation. It is not my intention to enter into a lengthy examination of the pathology of the pulp. The pulp has not, like enamel and dentine, a unique pathology—one totally differing in its phenomena from

every other disease ; and the point which I wish mainly to emphasize is that the pathological changes which take place in an exposed pulp are due to inflammation, and are in their nature essentially the same as similar inflammatory processes in other tissues of the body. It matters not whether an iris, a synovial membrane, a lung lobule, or a dental pulp be the seat of the morbid action, these processes are the same, modified only by the anatomical peculiarities of the part. In the case of the pulp, it must be borne in mind that it contains certain specialised cells, and, next, that it is confined within the rigid walls of a chamber which prevents swelling and checks the ready escape of inflammatory effusions and exudations. What we, under this heading, would like to know is whether a pulp, exposed to the atmosphere and no other irritation, will in every case pass into a condition of disease. We know that a joint or other analogous cavity, wounded, or opened in a similar way, will speedily become inflamed, if not kept aseptic by art. The condition of an exposed pulp might be, perhaps, broadly compared to that of the tissues exposed in such a wound or in a compound fracture. Then we would like to know whether a wounded pulp will, under antiseptic treatment, heal and cicatrize. We often hear of cicatrization of a pulp, but I am not aware that a cicatrix has ever been demonstrated.

Lastly, we would like to know under what conditions calcification of an exposed pulp takes place. We have in our museums remarkable specimens of calcification—for instance, in pulps exposed by fracture of a tooth—yet I am not aware that there has ever been demonstrated calcification of a pulp following after lapse of time upon the operation of capping. From the pulp inflammation extends to the dental periosteum, and to the pathology of the morbid changes there ensuing may be applied equally the general observations which I have made respecting the pulp. The pathology of dental periostitis is, in its essence, the same as that of other periosteal structures, and, as results, we get fibrous deposit, exostosis, necrosis, or absorption. The modification of the processes by the anatomical peculiarities of the part may be exemplified by the fact that the intimate blending of the cement with the dentine prevents exfoliation in necrosis such as we might expect in other bones under analogous conditions. As our general knowledge of the pathology of periosteum and bone extends, so will be enlarged our knowledge of the pathology of dental periosteum and cementum.

Very distinct from caries, yet sometimes confounded with it, is the disease commonly known as erosion. Like caries, it is a destructive process, commencing on the surface of the teeth, and proceeding inwards; but there the resemblance ceases. In erosion, the tissue that suffers most is the enamel. The eroded cavity is hardly ever undercut; its surface is always fairly hard and polished. Any surface of a tooth may be subject to erosion. Its appearance in some cases would seem to suggest friction of the bite as a cause; but the fact that it attacks several surfaces of the same tooth, and even teeth that have no opponents, shows the insufficiency of that explanation. Though most commonly attacking the necks of teeth, it not infrequently commences on or near the cutting surfaces. It occurs in teeth in which caries is actually going on at the same time; it shows no preference for fissures or sheltered crevices, but freely destroys those surfaces most readily washed by the tongue and the saliva. Its cause has never been clearly traced to the excessive use of the tooth-brush, and it is found in patients who never clean their teeth. Erosion presents a condition exactly similar to that which might be expected if the lime salts were slowly dissolved out by acid, and the surface kept polished by constant friction. The morbid anatomy of erosion is admirably described by Mr. A. Underwood in a recent number of the Journal of this Association. A bicuspid tooth had each of its surfaces destroyed as by a clean slice, very little enamel remaining. In the same mouth erosion of an upper central had affected both the lingual and labial surfaces, until a very thin partition alone remained. A section of one of the teeth included, fortunately, not only the eroded surface, but also a point where caries was going on in the same tooth. The caries was very dark, fairly soft, and spreading as usual into the dentine, leaving a smooth plane of dentine exposed. Microscopically, while the caries presented the characteristic appearances of that disease, the eroded surface was not, apparently, altered at all, except that there were a great many irregular cracks running inwards at right angles to the plane of the surface. This, however, might be, perhaps, due to tearing in cutting the section. While in caries one of the main agents is micro-organisms, which most readily destroy the more organic tissues, erosion presents the result of purely acid solution—a very acid condition of the buccal secretions, assisted by the ordinary friction to which all teeth are exposed; but without the co-operation of organisms.

In brief, of this we are certain with regard to erosion, that it can be due alone to chemical and mechanical causes acting externally to the teeth, and we would like to know exactly what governs the incidence of the disease, why it attacks certain teeth by preference in each case, and why certain surfaces only of those teeth?

The limits of the time at my disposal will allow me to refer to the etiology and pathology of only one more disease, and I am sorry to admit my remarks must consist of a confession of our ignorance, and a mere enumeration of things we would like to know. The disease chronic suppurative wasting of the alveoli seems, if not a disease of modern life, to be at least on the increase at the present time. We are all familiar with it. It commences as inflammation, appearing to affect simultaneously the edge of the gum and the alveolar periosteum. There is a discharge, usually slight in quantity, of muco-pus from within the edge of the gum. The gum and alveolus slowly waste until the tooth is lost. There is a deposit of tartar around the denuded surface of tooth. It may affect one tooth only, but more commonly several at the same time, subsequently extending to the whole set. The inflammation is usually extremely chronic, with occasional sub-acute and rarer acute exacerbations. We do not know whether this malady is of local or constitutional origin. We do not know which tissue is locally the seat of the initial lesion. M. Magitôt has recently affirmed that it is always present in diabetes. I have seen two cases, since he drew attention to the subject, in diabetic patients; but I have seen many cases in which no malady could be discovered, except, perhaps, disturbance of the general health due to indigestion and discomfort arising from the disease itself. It has been stated, but I have seen no verification of the statement, that the affection is really due to either ulceration or caries of the alveoli progressing from their edges onwards to the depths. These statements, as well as the whole subject of the morbid anatomy of this disease, might have light thrown upon them in the post-mortem room. There must be a considerable number of subjects to be found in the dissecting room in whom this malady is present; and I commend this suggestion to our pathologists.

Although I have left many topics of my subject altogether untouched, and have by no means exhausted those with which I have dealt, I am sure I am beginning to trespass sorely upon your patience, and I must draw to a close. We need not be discouraged when we contemplate the sum of our knowledge and compare it

with the mass of facts for which we cannot account. We have the satisfaction of knowing that in many of the diseases which we have to combat, our treatment is based on sufficiently solid ground to make it certain and effective. There is no surgical disease the treatment of which is more satisfactory than that of caries. Where we most fail is in prophylaxis ; or, perhaps, more correctly, in prevention of the main pre-disposing cause, inherent structural imperfections of the tissues.

Not to speak of that which falls outside the scope of my paper, such as what pertains to modes and means of treatment, there is ample work in the elucidation of the problems I have mentioned, to satisfy the scientific ardour which animates many of that bright band of young men who are now entering our profession. They may find worthy examples for emulation in those distinguished men whom time has inevitably removed, and in those whom we still possess amongst us. Let us hope that these young recruits may receive their inspiration from such true men as Bell in the past and our distinguished leader John Tomes in the present. These are labourers who toiled in the right scientific spirit. They recognised, as the genuine seeker after truth must always recognise, that for great results science must not be pursued in a spirit of narrow utilitarianism, that the worker must not be for ever crying *cui bono* ? for ever asking of what use is this new knowledge ? He must be content to feel that there never was yet established a scientific fact, isolated or useless as it might at first seem, which did not in the end help in promotion of the happiness of mankind. It is somewhat the fashion to make light of dental diseases and the suffering they cause, probably because they do not involve direct danger to life. But those who practise dental surgery know that these diseases are often serious enough in themselves to render life almost as wretched as it can be rendered by physical suffering. Those fortunate explorers whose labours lead to a more exact knowledge of these diseases may perhaps be disappointed of their due meed of honour and fame ; but nothing can deprive them of a reward more desirable than these, and sweeter, perhaps, the greater the self-sacrifice incurred ; they may count upon an inestimable solace in the consciousness that they with their own hands have added even one atom to that store of knowledge which goes to the assuagement of human misery and the prolongation of precious life.

REVIEWS AND NOTICES OF BOOKS.

TRANSACTIONS OF THE AMERICAN DENTAL ASSOCIATION, 1881. S. S. WHITE, Philadelphia.

THE Transactions of this enterprising Association make up a volume of over 200 pages, comprising all necessary information concerning its organisation, and the management of its affairs. The literature of the dental profession in America is represented by the Address of the President, a number of papers on various subjects, and discussions, some of which seem to have arisen on papers read some time prior to the records of the present volume.

To facilitate business the subjects likely to be brought under the consideration of the Association are divided into seven sections. The first is termed "Artificial Dentistry"; a title which suggests the question what the counterpart of this may be. Is it Natural Dentistry? There is also a Publication Committee, who are to superintend the publication of such portions of the Transactions as the Association may direct, &c. The specified duties of this Committee are, curiously enough, followed by a "disclaimer," very like the editorial announcement "We do not hold ourselves responsible for the opinions of our correspondents." This judicious hedging no doubt relieves the Committee and the Association of much responsibility, but on the other hand it inflicts on the readers of the Transactions an amount of labour from which they would gladly be excused.

Mixed up with a quantity of really useful material, such as the President's Address, Dr. G. T. Fredrick's paper on Cylinder Filling, Dr. Bodecker's paper on Dental Histology, and Dr. Shephard's thoughtful remarks on Dental Education, is a quantity of pretentious verbiage which may pass for scientific knowledge with ignorant people, but which cannot fail to bring our profession into disrepute in the opinion of all educated men, and we would earnestly call upon the Publishing Committee to rise above the merely clerical duties which have been prescribed to them, and to grasp firmly and courageously the functions which properly belong to them, rather than seek shelter behind any disclaimer however ingeniously worded it may be, to relieve them of responsibility.

It is with a mixture of shame and indignation that we contemplate such a paper as that of Dr. Atkinson on Dental Nomenclature, and we cannot understand the object of its publication, unless

it be to gratify the vanity of a craze on the one hand, and to bring our profession into ridicule on the other. It is all very well for Dr. Atkinson to talk of intuition and inspiration, but if his intuition would lead him to understand the meaning of the scientific terms now in use, it would serve a better purpose than that of prompting him to evolve a nomenclature which might be mistaken for the inarticulate babbling of an infant, and have as much meaning, so far as language is concerned. No doubt it is puzzling to understand why a man should be called Atkins, as also why another should be called Atkinson, yet each man is known by, and will answer to, his name, and if either should spell his name backwards or call himself A-do-bo-bo, it would not take us any nearer the root of the matter. Indeed this new language of science is rather like some other scientific talk in these Transactions,—very new, indeed, but very unscientific. We had intended to have written strongly on this subject, but the pungent remarks in the *Ohio State Journal of Dental Science* for August, spares us this invidious and disagreeable task. We always turn to American dental literature with much expectancy and interest, but surely we might be spared the pain of having set before us such a paper as that of Mr. J. R. Buchanan on the "Central Relations of the Teeth," and we are rather at a loss to know why we should be expected to read an account of reflex action, such as might have been written by a second year's student, to prove that there are degrees of pain inflicted in dental operations according to the skill or want of skill on the part of the operator.

So also in the discussions we find here and there an able and temperate speech mixed up with statements of quasi-scientific experiments, in reasoning on which the speakers dogmatise with an assurance defying all contradiction.

Will not the educated American dentists make themselves heard and put an end to all this assumption of scientific knowledge? Neither the writing nor the talking powers of our American brethren require to be supplemented by this "intolerable deal of sack to one half-pennyworth of bread." We have refrained from making extracts from the Transactions in illustration of what we have written, not only because we cannot afford the necessary space, but because we would rather not give additional publicity to that which should never have seen the light.

A POCKET-BOOK FOR CHEMISTS, METALLURGISTS, &c. By THOMAS BAYLEY, ASOC. R.C.Sc.I., &c. Second edition. E. and F. N. Spon. 1881.

This comprehensive little compilation contains in a condensed, but most accessible form, among other technical matters, nearly all the chemical, metallurgical and physical data to which a dentist usually has occasion to refer; and will enable him to always have, literally at his fingers' ends, complete and accurate tables of constants, facts, reactions, calculations and formulæ that are but imperfectly represented in his text books, and for which he might have to search an extensive scientific literature. Four hundred and forty closely printed pages of small but clear type on thin paper, are comprised in vest-pocket bulk, and furnished with a copious index.

PARLIAMENTARY AND LEGAL.

Minutes of Evidence (on Dental Questions) taken before the Royal Commission on Medical Acts.*

IN the July number of this Journal we noticed briefly those portions of the Report of the Royal Commission on the Medical Acts which have reference to the Dental Profession, and we promised that, when the Blue Book appeared, we would publish also the evidence upon which these conclusions of the Commissioners were founded. This promise we are now able to fulfil.

The Commission was composed of the following members:—

The Earl of CAMPERDOWN; the Bishop of PETERBOROUGH; the Right Honourable W. H. COGAN; Sir GEORGE JESSEL; the Right Hon. G. SCLATER-BOOTH; Sir WILLIAM JENNER; JOHN SIMON, C.B., F.R.S.; Professor HUXLEY, F.R.S.; ROBERT McDONNELL, M.D., F.R.S.; Professor TURNER, F.R.S.; JAMES BRYCE, Esq., M.P.; JOHN WHITE, *Secretary*.

Dr. JOHN S. BILLINGS was called in (1 Aug., 1881) and examined mainly with reference to the present state of medical education in the United States and the value of American medical diplomas,

* Report of the Royal Commissioners appointed to Inquire into the Medical Acts, with Minutes of Evidence, Appendices, and Index. London: Eyre and William Spottiswoode, 1882.

but was incidentally asked the following questions with reference to Dental diplomas.

4825. (*Professor Turner.*) Will you state to the Commission what positions you hold in the United States?—I am a doctor of medicine, a surgeon in the United States Army, and Vice-President of the National Board of Health of the United States.

4854. I had heard it stated that there was a university in Philadelphia which was a very eminent school of dental surgery?—That is the University of Pennsylvania.

4855. Is the University of Pennsylvania famous for its dental surgery?—It has a very good dental school connected with it that has grown up within the last four or five years.

4856. I have heard it stated that there were as many as 70 operating chairs in that University; would that be true, do you think?—You mean of dentists?

4857. Yes. — There is a very large number; it is one large room very brilliantly lighted, and there are a large number of chairs there.

4858. Does it stand in the United States as the first institution for dental surgery?—I am not prepared to say that; I do not know.

4859. Dental surgery, I believe, as a matter of fact has been brought to probably greater perfection in the United States than in any other country, and some of the most eminent dentists in Paris are Americans?—It has been brought to a very high perfection. A vast amount of ingenuity has been displayed in connexion with it. There is a very excellent dental school at Harvard, I know.

4860. Do you think the Medical Council would be safe in recognising the degrees of those two Universities, Harvard and Pennsylvania?—So far as regards dentistry only, do you mean?

4860a. So far as regards dentistry?—I should think so.

Mr. JOHN TOMES, F.R.S., M.R.C.S., L.D.S.Eng., examined
(*October 21st, 1882.*)

6339. (*Chairman.*)—You are a Member of the Royal College of Surgeons and a Fellow of the Royal Society?—Yes.

6340. And you appear here to represent the views of the British Dental Association?—Yes.

6341. Would you kindly inform us of the aims of that Association and the number of its Members?—The particular aim of the

Association is to offer active assistance in carrying out the spirit and letter of the Dentists' Act, and also to encourage scientific investigation by the reading of papers and the kind of meetings usual with societies of a scientific character.

6342. Does your Association meet frequently? We have annual meetings. The Association is represented by a large Representative Board, consisting of upwards of forty members, which meets at least four times a year, and if occasion requires more frequently; and, moreover, we publish a monthly journal. The aims of the Association are shewn in the following extract from the Memorandum of Association:—

“The objects for which the Association is established are the promotion of dental and the allied sciences, and the maintenance of the honour and the interests of the dental profession, by the aid of all or any of the following:—

- (a.) Periodical meetings of the Members of the Association, and of the Dental profession generally, in different parts of the country.
- (b.) The publication of such information as may be thought desirable, in the form of a periodical journal, which shall be the journal of the Association.
- (c.) The occasional publication of transactions or other papers.
- (d.) The grant of sums of money out of the funds of the Association for the promotion of the Dental and the allied sciences in such manner as may from time to time be determined on.
- (e.) The maintenance of the spirit and provisions of the Dentists' Act by such lawful means as may be necessary.
- (f.) The encouragement of the Dental Benevolent Fund for the relief of decayed or necessitous members of the profession.
- (g.) And such other lawful things as are incidental or conducive to the attainment of the above objects.”

6343. What practical steps have you taken towards assisting in carrying out the Dentists' Act?—We have from time to time furnished information to the Medical Council which is entrusted with the carrying out of the Dentists Act.

6344. Do you maintain any direct relations with the General Medical Council?—No further than as an organisation devoted to promoting the education of Dentists, and also, as I stated before, to assist in carrying out the spirit and letter of the Dentists' Act as an educational measure; but we have no authority beyond the au-

thority of an Association which is incorporated, just as the British Medical Association is, under the same conditions, an incorporated association.

6345. What kind of assistance do you render to the Medical Council?—By furnishing them with such information as may come to our knowledge; I may give you an instance. We brought before their notice a Dental curriculum which had been in operation in the College of Surgeons of England under its Dental Charter, and we urged that that, a tried curriculum, should be as nearly as possible followed by the Colleges of Surgeons of Ireland and of Scotland which were authorised to grant diplomas in Dental Surgery under the Dentists Act.

6346. Do you happen to know whether your recommendations were adopted by the Medical Council and urged by them on the other bodies?—The Medical Council adopted a curriculum in all essential particulars similar to that which we urged for their acceptance.

6347. Has that curriculum been generally accepted?—It is accepted by the four licensing bodies in Dental Surgery.

6348. Then so far as the experience of your Association goes the Medical Council has in this respect been of great use in promoting the best interests of dentistry?—My experience, and I think the experience of the body I represent, is that great good has been effected by the Medical Council in carrying out the Dentists' Act, subject to one or two exceptions which perhaps we may come to afterwards: but they are exceptions that have no relation to the action of the general body of the Medical Council, but rather bear upon an imperfect organisation. That imperfection of organisation is the main subject that I wish to bring before the attention of the Commission.

6349. Is it your experience that the Associations of Dentists or the Colleges of Dentists have been backward in accepting the recommendations of the Medical Council in any portion of the kingdom?—No, I think that the licensing bodies, the four Colleges of Surgeons, to which I presume your Lordship refers, and to which I have alluded before, have all accepted the recommendations of the Medical Council.

6350. Is it your opinion that the Colleges accept the recommendations of the Council with the more readiness because they are merely recommendations, and are not set forth with any actual authority?—I am quite unable to answer that question.

6351. I think you have not told us approximately the number of members of your Association?—About 420, of whom 40 are qualified as medical practitioners, and 250 licentiates in Dental Surgery.

6352. Is your Association mainly for London, or does it extend to the provinces?—It is for the whole of the United Kingdom.

6353. Are there any other associations of Dentists of a similar kind to your own?—I do not know of any association of a similar kind. There is a small association who call themselves "The Association of Surgeons Practising Dental Surgery." They do not, to my knowledge, publish a list of members, but when the Dentists' Act was before the House of Commons there were not more than about 100 persons who held a licentiate in Dental Surgery conjointly with a strictly medical qualification, or who practised Dental Surgery under a medical qualification only; of that supposed 100 (and I do not think there were so many) I think 91 petitioned Parliament and 68 memorialised Members of Parliament individually, in favour of the Dentists Bill, and we have their names.

(The witness handed in a copy of the petition to Parliament and of the memorial to individual Members of Parliament.)

The petition approving the Dentists' Bill was signed by upwards of 1100 Dental practitioners, viz. by

Dental practitioners who are licentiates in Dental Surgery only, of the Royal College of Surgeons of England	184
Dental practitioners who are licentiates in Dental Surgery, and also qualified medical practitioners..	42
Dental practitioners who are licentiates in Dental Surgery and hold English and foreign medical qualifications also	2
Dental practitioners who are qualified medical practitioners only	28
Dental practitioners who hold foreign medical qualifications only	17
Dental practitioners who are qualified medical practitioners, and hold foreign Dental qualifications...	2
Dental practitioners who do not hold any qualification	895

The following is a copy of the memorial to individual Members of Parliament :

Dental Practitioners Bill.

SIR,—The principle and object of the Bill now before Parliament is simply this : That a person shall not hold himself out, by the use of a distinctive title, as possessed of a special qualification to practise Dental Surgery, unless he has actually qualified himself; subject, however, to a full recognition of all existing rights and privileges.

We being ourselves Fellows and members of the Royal College of Surgeons of England, or other similar bodies, therefore venture to ask your support for the "Dental Practitioners Bill," which has been considered with very great care, and is submitted to Parliament with the concurrence and support of the most eminent members of the Surgical and Dental professions.

We are, Sir,

Your obedient Servants,

(Here follow the names of 68 qualified medical practitioners practising Dental Surgery.)

6354. They did not all petition?—I cannot tell you, inasmuch as the Association of Surgeons practising Dental Surgery have never published a list of their members. We know that a number of men have left them and joined our Association, but they publish no minutes or transactions.

6355. The British Dental Association, I may take it, is generally speaking in favour of the Dentists' Act of 1878, is it not?—Necessarily. They are bound by their Articles of Incorporation, by the rule that I mentioned, and it is one of the Articles of Incorporation that they shall support the Dentists' Act.

6356. And they conceive that it is in the true interest of the Dental profession that it should be associated with the medical profession through the agency of the General Medical Council?—Yes, I have never heard any difference of opinion upon that subject.

6357. The Dentists, as such, have no special representation, I believe, on the General Medical Council?—No, they have no representation further than this, which is a very partial one. The surgical corporations are represented, and the more educated portion, if I may use that expression, the diplomaed portion of the Dentists, are licentiates in Dental Surgery of this or that College; and it may be rightly presumed (and it has been shown to a certain extent that such is the fact) that the representatives of those

colleges take a considerable interest in the respective Dental departments. Sir James Paget has on many occasions shown at meetings of the General Medical Council, and of the College of Surgeons, that he was fully acquainted with all the details of the working of the Dental department of the College of Surgeons, and took a strong interest in it; but we have no direct representation.

6358. And Dentists, as such, do not vote in any of the corporations which return members to the Medical Council at the present time?—They do not; they are simply licentiates in Dental Surgery of this or that corporation. That is the title given them by the Dentists' Act. In this connection it may be stated that the Royal College of Surgeons, England, under its Dental Charter of 1859, has, since that date, had a Board of Examiners in Dental Surgery composed of surgeons and dentists in equal numbers, that the Council of the College referred dental questions to this Board, the report of which thereon has been, I believe, usually adopted and acted upon by the Council; and it may be further stated that this course of proceeding on the part of the College has been attended with very satisfactory results as respects the education and examination of Dentists.

6359. Is it the opinion of your Association that you ought to be represented more directly on the General Medical Council?—The object of my presence here is to plead for a certain degree of representation, supposing any change is made in the constitution of the Medical Council; but I do not come here on behalf of my associates or myself to make any complaint against the Medical Council as such. Whenever I speak of it I have occasion to speak of it in precisely opposite terms to those of complaint. But the reason that we desire representation is that we have seen from time to time that the Council has not been sufficiently informed upon strictly dental matters when considering them, and if your Lordship desires it I think I can make good my case.

6360. Can you shortly point out to us an instance?—Some little time since the Association sent in to the Medical Council a list of names of something like 400 persons, whom on high legal authority the Association believed to be wrongly registered, that is to say, that these persons had no right of registration. The Act requires that a person shall be *bonâ fide* engaged in the practice of Dentistry, separately, or in conjunction with medicine, surgery, or pharmacy. In the cited cases those persons, although they had returned themselves as pharmacists, or as practising Dentistry

with medicine and surgery, had no right whatever to practise either the one or the other. We sent in proof of this allegation that their names were not to be found in the Chemists' and Druggists' Register or in the Medical Register; and those persons only have a right to practise medicine who are registered in the Medical Register, or to practise pharmacy who are registered in the Chemists' and Druggists' Register. The Medical Council had in the meantime taken the opinion of Mr. Charles Bowen (now Mr. Justice Bowen) as to how this phrase should be read; and although we have not seen that opinion, yet it is not contradicted that it coincided, I am not in a position to say in all its details, but mainly, with the opinion that we sent in from Mr. G. A. R. Fitzgerald, the draughtsman of the Act (Copy of Case and Opinion produced*). The cases of these 400, with the two legal opinions, were referred by the Medical Council to its Dental Committee, which Dental Committee is empowered by the Act to ascertain the facts of such cases, and its decision upon the facts, so far as the Medical Council is concerned, is final. It does not appear that the Dental Committee has the power of determining what shall be the law applicable to the cases. The Medical Council was summoned last February to receive the report of this Dental Committee, and then to our utter astonishment on the day of the meeting we found that in that report no mention was made of Mr. Justice Bowen's opinion or of Mr. Fitzgerald's, but a wholly new opinion, obtained from Sir Farrer Herschell and Mr. Muir Mackenzie jointly (Copy of Opinion handed in†), was substituted, which opinion completely traversed the opinions that had been sent in to the Committee by the Medical Council. Had there been a Dentist on that Committee I feel sure that that Dentist would have remonstrated very strongly against the introduction of a perfectly fresh opinion without any reference whatever being made to the pre-existing opinions. I think that he would have had grounds of complaint had not that remonstrance been acceded to. Moreover, we who sent in the names were not appealed to to substantiate our charge, or appealed to in any way whatever, although the Committee had full power to call in our assistance, and to ask if we had any additional information to afford, and we could have given them a great deal of information. But in

* See *Journal of the British Dental Association* for December, 1880, p. 583.

† See *Journal of the British Dental Association* for February, 1881, p. 63.

the absence of any one on the Committee who knew what the nature of the information might be, it was not sought. Then, when the matter was discussed before the Medical Council itself, Dr. Quain said "that the Dental Committee found there had been no fraud in any one case referred to by them." Now, what would have been pointed out, had there been a Dentist on that Council, would have been that, of the names sent in, something like 70 or 80 had withdrawn from the Register voluntarily, and as many had declined to answer any questions or to take any notice of the letters addressed to them by the solicitor on the part of the Council. I think had there been a Dentist on the board that fact would have been pointed out. Then again, a considerable number of persons had registered themselves as in practice before the passing of the Act, who had registered themselves in the Chemists' and Druggists' Register, and who had passed in pharmacy subsequently to the passing of the Dentists Act, so that their declaration was incorrect; and I think that that wrong would have been exposed and time asked for further consideration had there been a Dentist on the Council.

6361. Then, I think I may take this from you, that you do not complain that in this instance the Medical Council neglected you, but what you feel is that if the Dentists had had a special representative upon the Medical Council he would necessarily have been on the Dental Committee, and he would have put new facts before the Dental Committee, and afterwards before the Medical Council, which as you think were not brought before them, and which you think would have exercised a very important influence upon their decision?—Yes. When the matter was under consideration, Dr. Quain defined Dentistry as consisting of merely pulling out teeth, to which stopping and scraping teeth had now been added. He might with as much accuracy have defined ophthalmic surgery as merely taking out eyeballs. He gave that definition in supporting the retention on the Register of a certain number of hairdressers who had occasionally drawn teeth, but who admitted that they knew nothing of anatomy in any form whatever. I think that definition of Dental practice should have been corrected. The upshot of it was, that the Council passed a resolution to the effect that there was not sufficient evidence to justify the removal of the cited names. On the strength of that decision, and under legal advice, we laid a case before Sir John Holker, Mr. R. S. Wright, and Mr. G. A. R. Fitzgerald, a case

very carefully drawn up, and we submitted as part of the case the opinion of Sir Farrer Herschell and Mr. Muir Mackenzie, and asked for their joint opinion. The consultation resulted in an opinion precisely opposite to the one accepted and acted upon by the Council, *i.e.* an opinion to the effect that the persons whose names we cited had no right to be on the Register (Copy of Case and Opinion produced*). Now, if a Dentist had been on that Committee, and had had the power of speaking and of voting at the Council, some such course as the one we subsequently followed would have been proposed at the time, and the Council would have been asked to defer its decision until the legal difficulty had been cleared up. As it was the Council decided upon, and were forced as it were to accept, the ruling of the Committee, not only in respect of the facts of the cases, but in respect of the law applicable to them. In further illustration of the want of special information on the part of the Medical Council I may mention that a councillor at the last session said, "He thought they (Dentistry and Dental Surgery) were different things," whereas the former term, of recent American parentage (since 1842), has been used from the first as a short substitute, without any difference of meaning, for the longer and more expressive term of Dental Surgery. In this sense it is used in the Dentists' Act, the two terms having been introduced therein for the purpose of alternative use, and for the avoidance of any difference of meaning.

6362. You are evidently of opinion that it would have been of very great advantage on that occasion, and possibly on several others, if there had been a special representative of the Dental profession on the General Medical Council; would you kindly point out to me what you consider the best form of medical council so far as the Dentists' profession is concerned?—My own feeling would be in favour of two Dentists, rather than one, being appointed (either by the educated Dentists, that is to say, by the licentiates in Dental Surgery, or preferably perhaps by the Privy Council), whose duty it should be to attend the Council on all occasions whenever any Dental questions arose, and that they would in that position be rendered responsible for conveying to the Council whatever information was necessary in respect to the wishes and necessities, educational and otherwise, of Dental practitioners. I am not in a position to say which would be the

* See *Journal of the British Dental Association* for August 1st, 1881, p. 336.

better form of election ; I have no authority to do so from the Society that I represent ; but I think that supposing the attendance of the persons so elected were limited to the occasions when Dental questions were under consideration, it would not be an unreasonable thing that there should be at least two, and for this reason, that if the Privy Council appoint, they might appoint unwittingly a person who is very incompetent ; but there is a far better chance of securing effective assistance if they appoint two than if they appoint only one. The same holds good with reference to an appointment made by the licentiates ; the most noisy man might get in ; but if two were elected the chance of satisfactory representation would be greatly bettered.

6363. Then you would be in favour, in short, of there being two direct representatives of the dental profession upon the Medical Council?—I should be in favour of there being two representatives on the Medical Council, nominated by the Crown, or elected by the licentiates, the attendance being limited to dental business.

6364. Might it not be suggested that this member was placed in rather an inferior position as compared with other members of the Council if he were informed at the time of his election or nomination that his attendance was only required on certain specific occasions?—I think that as a dentist's education is special and general, estimated at 3-5th general and 2-5th special, the dentist is already well represented in respect to his general education ; and what we want there is information as regards his special conditions and requirements, educationally, and otherwise.

6365. In proposing that there should be two direct representatives of the Dentists on the General Medical Council, have you taken into consideration what the total number of the Medical Council would be ; are you making that proposal of two dentists with the idea in your head that the Council will continue to consist of 24?—I have no knowledge of that kind. I make the recommendation of two, because if there were one he would be as far as the Dentists were concerned despotic, and he might be a bad despot.

6366. And he might also possibly be absent when wanted?—He might.

6367.—With regard to the question of infractions of the Dentists Act, and how far those infractions are or ought to be dealt with by the Medical Council, does your Association take

any cognisance of the infractions of the Dentists Act, *e.g.*, the assumption of titles to which the persons taking them have no right, such for instance, as that of "Dentist Surgeon" by a person who has no connexion with the College of Surgeons?—It has been judicially settled already by the Court of Queen's Bench in January 1860, that you cannot impose any restriction upon the use of the title of dental surgeon until you come to a fresh race of men, and the fresh race of men are dental surgeons in virtue of their being licentiates in dental surgery. Hence it has been held that those registered persons who are already in practice, and who were in practice before the Act, could not be dealt with penally in respect of the question of title.

6368. Then you think that in so far as the dentists are concerned, there is no means of enforcing the penal clauses of the Dentists Act?—No, in respect to the use of titles by registered persons the point has been tried in the Court of Queen's Bench, and there thoroughly discussed, and has with a like result been very frequently discussed since that time, namely, by the Medical Council, by the Parliamentary Bills Committee of the British Medical Association, and by Parliament, when the Dentists Bill was in committee. *

6369. Is there anything else that you wish to put before the Commission?—In answer to your previous question I may state that the Association would prosecute a person who assumed the title of dentist who was not on the Register; but before they can prosecute they must in each case go to the Medical Council and ask its consent.

6370. That is because the prosecutors are the Medical Council, I suppose?—No; it was supposed that there might be some oppression exercised, to guard against which this provision was insisted upon by the Government. Supposing that we find an unregistered person calling himself a dentist we must state the case to the Medical Council, and gain its assent before we can bring an action against that person. *

6371. That is under the provisions of the statute?—Yes; and if any alteration were made, it would be very desirable that it should be made clear that the Executive Committee of the Medical Council should be able to give such power, because the Medical Council meets only once in a twelvemonth. A Branch Council can give such power, but a Branch Council perhaps only meets once in a twelvemonth. So that it is very desirable that the

Executive Committee should be able to empower us, or any other persons, to prosecute an individual who calls himself a dentist or a licentiate in dental surgery, he not being registered as either the one or the other. The Register records the nature of the dental qualification, that is, whether it be the possession of the licentiate-ship in dental surgery, or rests on the fact of having been "in practice before July 22nd, 1878," and will in future record also any surgical qualification held by the registered person.

6372. (*Mr. Simon.*) You referred to an occasion on which the course taken by the General Medical Council seemed to your Association unsatisfactory, owing, as I understood you to mean, to the want of sufficient information?—I referred to the course taken in declining to strike off names from the Register on the authority of one legal opinion as against two or three other opinions of equal authority.

6373. Am I correct in my impression, that, whether right or wrong, the course taken by the Medical Council was a course determined by legal advice?—By the advice, I expect, of the solicitor; but I would again call attention to the fact that the report of the committee upon which the Council acted contained no notice whatever of two high legal opinions that had been submitted, but substituted a third, which came at the last moment as a thunder clap upon us.

6374. I am not at all meaning to question you upon the right or wrong of the course, but only upon whether it was not essentially a legal matter, and whether the Council did not act on legal advice?—They acted on the advice of their solicitor, I believe, rightly or wrongly.

6375. Am I right in my impression that on that occasion no question was raised requiring special dentistic knowledge in the councillors engaged in the discussion?—I do not think that the question of dental skill was very much considered any farther than that Dr. Quain, in advocating the course of the committee, said that he should prefer submitting himself to the barbers who had no anatomical knowledge rather than to many others who were supposed to be very much more highly educated.

6376. I take it for granted that you would not insist upon a particular phrase used by a particular councillor, perhaps not very deliberately. My point is that the Council (as a whole) was dealing with a question which had to be determined by legal advice, am I right in that?—The Council as a whole were told, I

think by the solicitor, that they could not discuss this or that question ; and it was said by one member of the Council, whose name I need not repeat, that he hoped the resolutions would be so framed as to show that "the Council was simply acting mechanically in obedience to the law." Another member of the Council said, on a later occasion, when speaking of the duties of the Executive Committee : "The Council was called upon mechanically, with a pistol at its head as it were, to follow the opinion (*i.e.*, Sir Farrer Herschell's), laid before it, and we simply endorsed what was laid down to us as the law by the lawyers.' The whole of my point is to show that there is a want of information and a want of well informed dental representatives.

6377. You are of opinion that if there had been a member of the dental profession attending the Medical Council as assessor he would more strongly have contested the legal view of the case?—He would have more strongly contested the legal view of the case, and he would have been able to adduce evidence which would, I think, have induced the Council to withhold its decision until the question had been more thoroughly investigated legally.

6378. (*Mr. Cogan.*) By the Dentists Act, foreign and colonial dentists have a right to be registered as well as United Kingdom dentists in a separate column, have they not?—Yes, assuming that their education is equal to that which is required of English dentists.

6379. The Medical Council only take degrees of certain foreign colleges?—They take the degrees of certain foreign colleges in accordance with their curricula, and in accordance with such information as their prospectuses furnish in respect of the length and character of their curricula, and in respect of the examinations and also in respect of the examiners.

6380. Can you inform us as to what certificates or degrees of American colleges are allowed to be registered?—Those of the Harvard and Michigan colleges alone. Our curriculum requires four years' attendance, and their curriculum only requires three years' attendance. The other colleges in America require perhaps only eight months' actual attendance. The examinations are conducted wholly by the teachers, and we hear very little of any rejections, and we know pretty well that persons can go to America and come back with a diploma of doctor of dental surgery from many of their institutions within five or six months, and sometimes within very much less time.

6381. Would that observation apply to the University of Pennsylvania?—I cannot answer your question off-hand, but all the American qualifications and requirements have been closely analysed, and the results will be found reported in the Minutes of the Medical Council. I cannot carry it all in my mind, because there are, I think, something like 15 of them. The Harvard and Michigan colleges are the only two institutions that require even the shadow of a preliminary education. We require a preliminary education the same as that required of a medical student.

6382. So that there is full security, at least now, that none but a properly educated person can get on the Dental Register in this kingdom?—He must have a thorough knowledge of the whole subject of dental surgery; what we have contended for, and what is now being carried out, is that he should have an education equal to that of a medical man, but differing in some of the details. We strike out of the medical education certain medical specialties and put our own special subjects in their stead, so that the education can be comprised in the four years, allotted alike to the medical and dental curriculum. If you were to require that the dental licentiatehip should be taken in addition to the ordinary medical qualification, then you must give six years for the education, which we have contended would be an unreasonable requirement from the bulk of the dental practitioners.

6383. Was it the fact that a vast number of names were put on the Register shortly after the passing of the Act of 1878, of persons who were by no means qualified?—A very great number indeed, and with a desire to eliminate some of them we sent in those names to the Medical Council.

6384. At the present moment are there many of those persons still on the Register?—A great number. In the absence of a public record the dental practitioners of the United Kingdom were, in May, 1878, on the authority of the carefully maintained private list of Messrs. Ash and Sons, estimated at about 2,000. This well-known leading firm has, for upwards of half-a-century, supplied the larger portion of dentists with the instruments and materials used in dental practice; hence for the purposes of their trade they have used every available opportunity to possess themselves of the name and address of each dental practitioner. This list included a limited number of dentists' assistants and pupils, and of persons who, in conjunction with other callings, practised dentistry. The initial Dental Register, 1879, contains 5,289 names. Of these

2,049 returned themselves as practising dentistry with pharmacy; and if reasonable allowance be also made for the dentists' assistants, pupils, &c., assumed and real, who have registered as having been in practice before the passing of the Act, it will be seen that the estimate of 2,000, as an approximate number of the persons in actual practice, in the sense contemplated when the Act was drawn, and before the word pharmacy was added to Section 6 (c.), is justified by the Register. In answer to my inquiry Messrs. Ash state "we consider that 2,000 names may be fairly *added* for assistants, &c., pupils of dentists who have taken advantage of the Dentists Act to register themselves. We regret that many others who had no such professional claim to be registered have got placed upon the Dentists' Register."

6385. (*Chairman.*) With reference to the question of foreign certificates, it rests with the General Medical Council, I believe, to decide as to the certificates of which of the foreign institutions should be accepted?—Yes, it is entirely in their power.

6386. Have you ever heard of complaints coming from institutions which have applied to have their certificates recognised and have not been successful?—I have heard that some institutions have made complaints, but members of others have expressed great satisfaction with the course taken, and they have, moreover, said that they hope that sooner or later the course taken here will force their colleges into a higher qualification and lead to a better state of dental education, for it is notorious that in America, both in respect to medical and dental education, qualifications have been obtained with scarcely any knowledge of the subject of either. Confirmation of this statement will be found in "The History of Dental and Oral Science in America, 1876," in "Special Report upon Medical Education and Medical Institutions in the United States of America, prepared for the United States Bureau of Education," by N. S. Davis, A.M., M.D., 1776—1876; in the address on "The Relations of the Medical Profession to the State," by D. B. St. John Rosa, M.D., 1879; and in "The Address on Dental Education," by Dr. Eliot, President of Harvard University, 1879.

6387. Do you happen to know whether there are any dentists of eminence who hold foreign qualifications which are not recognised, and which they think ought to be recognised?—I have not any instance in my mind at the present moment. I remember one case where a gentleman contended very strongly that a cer-

tain qualification should be recognised, but when the whole thing had been gone into he said, "I believe the General Medical Council have done quite rightly." It was argued by the institution which I represent that you could not reasonably expect a higher qualification of an Englishman than of a foreigner, and that the education which had been gradually perfecting here must be greatly lowered if you registered a great number of the foreign dental diplomas; and we wish to have the education increased in completeness and not lowered to meet on terms of equality a lower standard.

6388. To take the case of France, are the certificates of many of the French dental colleges accepted?—I do not know of the existence of one.

6389. Is there in France no such thing as an institution which gives certificates?—No, I think not.

6390. Do you happen to know whether there are any such institutions in Germany?—I think there is at least one, but their requirements are at present very slight. One of their representatives was present at the Medical Congress, and he gave rather a lamentable account of their requirements, and hoped that better times would come, and said that he looked upon the Congress as a great means of heightening the degree of education that would be ultimately required of dentists.

6391. We know that governments abroad are very particular with reference to the qualifications of medical practitioners; but can you tell us whether foreign governments are lax with regard to the qualifications of dentists?—At present I believe they are, but I think in almost every country now some effective step in this direction has lately, or is about to be taken. For example, in France, Germany, Spain, Switzerland, Canada, New Zealand, &c.

6392. (*Prof. Turner*). Then are we to understand that the dental practitioners in France and Germany are qualified medical practitioners?—They are either qualified medical practitioners, or, I believe, with the exception mentioned in respect of Germany, without any qualification whatever, just as they were here formerly, that is, before the passing of the Dentists Act when not one *bonâ fide* practitioner in twenty had any qualification.

6393. The General Medical Council has, I think, to frame regulations connected with the registration of dental students?—Yes.

6394. And the General Medical Council has also, I think, to approve of a dental curriculum?—Yes.

6395. And to approve of the subjects of the examination of dentists?—Yes.

6396. So that in your judgment it would be advisable that when those dental questions are under consideration in the Council there should be some one there who should advise the Council as to the facts?—Yes.

6397. Would you propose that this representative of the dentists at the Council board should sit there as a councillor, that is to say, as equal in position to the other members of the Council, or merely as an adviser, or referee?—I should place him on an equality with the councillors on dental questions, and give him a vote on dental questions.

6398. You would give him a vote and a deliberative power?—Yes.

6399. On such questions only?—Yes.

6400. And he should be on all dental committees?—Yes; but as I have already stated, I myself should be rather adverse to there being only one representative.

6401. (*Mr. Simon.*) Has it occurred to you whether you would extend that same principle to any other of our professional specialities; whether for instance you would have representatives of ophthalmology on particular occasions admitted to the Council?—Certainly not, inasmuch as they do not require that additional, very distinctive, and separate education that renders a dentist efficient, and without which he is utterly useless. Furthermore, while dental practitioners are counted by thousands the representatives of any other medical specialty may be counted by tens.

The witness withdrew.

Mr. THOMAS EDGELOW, M.R.C.S., L.R.C.P., was next examined.

6402. (*Chairman.*) You are a Member of the Royal College of Surgeons and a Licentiate of the Royal College of Physicians?—I am.

6403. And you have been requested by the Association of Surgeons Practising Dental Surgery to lay their views before us?—That is so. I appear as the President to express their views.

6404. Will you kindly tell us the objects with which your Association was established?—Our Association has been established entirely with the object of raising the status of the dental profession, and amongst the rules that we have, the first is that nobody can be a Member of the Association unless he is on the Medical

Register; we do not admit anyone who is on the Dental Register unless he be on the Medical Register as well, and the only qualification for our Association is that the person shall be on the Medical Register.

6405. (*Prof. Huxley*). And that he has had a complete medical education?—Quite so.

6406. (*Chairman*). What steps have you taken to carry out the object of your Association, viz., improvement of the Dental Education?—We try to make our views known amongst the profession as much as possible, and we hold meetings at specified times. We have certain points that we give very great prominence to, which I could, with your lordship's permission, briefly lay before you.

6407. Do you hold any relations with the General Medical Council?—We have no relations with the General Medical Council.

6408. Do you ever bring cases or facts with relation to Medical Education before their notice?—Our views have been brought from time to time before the General Medical Council by the secretary.

6409. With regard to the General Medical Council, dentists, as we know, have no direct representation upon that body; has your Association any strong opinion with regard to that point?—I cannot bind the Association to the opinion which I am going to give you; I had not time to get a Council Meeting to answer that question as regards the whole Association. For myself, I can only say that I feel that a dentist, as a dentist, would be out of place upon the Medical Council. If he is there as a registered member of the medical profession I understand his position, but I do not understand his position there only as a dentist.

6410. And you individually think that it would be inexpedient to allot a special seat upon the Medical Council to the dentists' profession as such, as apart from the institutions which now return members to the Council?—I do entirely think so.

6411. Are you content with the present constitution of the Medical Council?—Personally I am.

6412. And you can state to us the views of your Association upon that point?—My belief is that I am representing in these particulars the views of the Association.

6413. Then virtually you have no especial remark to make with reference to the Medical Council in its relations with the dentists?

—No, beyond the fact of my believing it to be inexpedient, as I have mentioned, to have a dentist, as a dentist, on the Medical Council, and in that I believe I represent the views of the Association, though I cannot speak positively upon the point.

6414. Does your Association approve of the indirect control which is exercised by the General Medical Council over dentists generally under the Dentists Act of 1878?—Our Association would be very glad if the Medical Council had more complete control, and could deal with the names of those who are on the dentists' lists as they would do if they were at liberty to exercise their own judgment.

6415. Then your Association approves the objects which the Act of 1878 had in view, namely, the establishment of a relation between the Medical Council, as representing the highest controlling body of the medical, and the dental professions?—If that implies that our Association at the time approved of the Dentists Act, it did not. We opposed in many particulars the Dentists Act when it was passing through Parliament, but without success.

6416.—Would you mind repeating to me the points which seemed to you objectionable in that Bill as it was at that time?—It seemed to us that under that Bill dentists are allowed to call themselves surgeons whether they be on the Medical Register or not. That is a point which our Association has the strongest feeling about. We feel that no one has any right whatever to call himself a surgeon with or without any adjunct word unless he be upon the Medical Register, that is, unless he has a qualification entitling him to be placed upon the Medical Register. We object as much to a man calling himself a surgeon oculist or a surgeon aurist unless he be on the Medical Register. I have at the present moment in my pocket a current paper with an advertisement in it in which someone who is not on the Medical Register (the name is immaterial), describes himself as "surgeon and practical dentist." There the public is absolutely misled. The man is not on the Medical Register at all, and I think that in the interests of the public they ought to know whether a man who calls himself a surgeon dentist is a surgeon or not.

6417. Was that the main ground for the dislike entertained by your Association to the Bill of 1878?—It was one main ground. Another main ground was the great number of men whom we considered absolutely unqualified who were allowed to register under that Act; and we feel that as regards that Act it would be

a very great thing for the protection of the public if there were a double list made, containing on one side the names of the licentiates in dentistry, and on the other side those who have no qualifications whatever. At the present time they are all mixed together, and nobody can tell whether or not a man had any qualification before he was put on the Register. Numbers are on the Register who confessedly have no right to be there, and whom an unsuccessful effort has been made to remove.

6418. Prior to the passing of the Act, those unqualified persons could, and I suppose did, practise as dentists?—They were supposed to do it, but we believe that numbers got on who had no more qualification than a man who opens your door to allow a visitor to come in or out.

6419. Then you hold that, at all events under the cover of that Act, those persons who obtained a status which prior to the passing of that Act they had not?—Precisely so.

6420. That is the main ground of your objection?—Yes.

6421. Was it legal prior to the passing of the Act for a person to style himself "Surgeon-Dentist"?—That is a point upon which there is a difference of opinion. Before the year 1878, there was a case before the late Lord Chief Justice, who decided that he had no power to stop a man calling himself "surgeon" in conjunction with some other name, although that man was not on the Medical Register.

6422. Will it be possible in future for persons imperfectly qualified to attain admission to the Dentists' Register?—Persons who are not licentiates in dental surgery, that is to say, those who have not taken what we consider the minor qualification, cannot be placed on the Dental Register in future, and undoubtedly that is a valuable safeguard, and I cannot help saying that it is a very good thing indeed that the Act has been passed, though we object to those men who are not qualified being swept in by its provisions. But we aim at something higher, and that is at having dentists qualified as medical men as well.

6423. Then your objection to the Act of 1878 is that thereby privileges were created in favour of certain existing persons, and your objection is not to the Act as it will work hereafter?—Certainly, as regards raising the status of the dental profession generally, but I do not think that that would touch the question of the use of the word "surgeon." The main thing that we object to is that anybody should be allowed to use the word "surgeon" in

conjunction with another word unless he is upon the Medical Register, and is entitled to place his name there by virtue of holding those qualifications.

6424. How would you propose to remedy that defect in the Act? By a clause in the new Medical Act stating that in future nobody shall be entitled to use the title of "surgeon" or "doctor" in conjunction with any other word whatever unless he be on the Medical Register, or have a qualification which is registrable on the Medical Register.

6425. Would you propose to allow a person who was possessed of the qualification of the College of Physicians in Edinburgh, and who also had qualified as a dentist, to style himself "Surgeon Dentist"?—Might I answer that by putting a question? Would such a person be allowed to practise any other branch of surgery under similar existing circumstances? If that is the case, I say yes, if not, I say no.

6426. Then may I take it that your objection to a person styling himself "Surgeon Dentist" is not that he is not a member of the College of Surgeons, but that he is a person not on the Medical Register?—It is so.

6427. Are there any other defects in matters of what I may call a penal nature to which you wish to call our attention, and to which the Act of 1878 does not in your opinion sufficiently attend?—I know of none.

6428. Are you of opinion that it would be expedient to place the dentists under a separate and special Act, and to govern them by a separate Medical Council of their own?—Dentists, as dentists, if they are to be separated from the medical profession, I think had far better have their own absolute guidance, and be left entirely apart from the medical profession. If they seek for a separate status as dentists they should be ruled by dentists.

6429. Should you yourself be in favour of separating dentists from the remainder of the medical profession?—Since the Act passed I should be in favour of separating dentists *qua* dentists from the remainder of the medical profession; but I should strongly object to surgeons who wished to practise dentistry being cut off from the body of the profession.

6430. Would you give me the number of members of your Association?—Fifty-five, and ten honorary.

6431. (*Mr. Simon.*) You take great exception to the use of the term "Surgeon-Dentists" for persons who are not members of the

College of Surgeons; in the judgment of Lord Chief Justice Cockburn, to which you referred, was not the view taken by him that "Surgeon-Dentist" was a compound word in the same way as the expression "veterinary surgeon" is a compound word, and that a man calling himself a Surgeon-Dentist was not calling himself a surgeon?—That view was taken, and that is why I wish that the new Act should expressly state that that view could not be taken in future.

6432. And was it not alleged that from time immemorial the expression "Surgeon-Dentist" had been used as a compound word, and had not been understood to encroach at all upon the province of surgeons?—I am not sufficiently up in the judgment of the Lord Chief Justice to give an answer to that question.

6433. As regards the other point to which you referred, viz. the indulgence which when the Act passed was shown to persons already in practice, and which brought upon the Register a certain number of persons whom you considered very indifferently qualified, if you had had the making of that Act, what other principle would you have adopted, if any, than the principle which was adopted, of admitting to the first Register all persons who were already *bonâ fide* in the practice of Dentistry?—I felt the difficulty so much that I am bound to say that I opposed the Act as strongly as I could when it was passing.

6434. And yet you think that the Act has been of advantage and is of advantage to the profession of Dentistry?—I think it will be hereafter. At the present moment I can hardly say, having regard to the mixed people that are registered, that the profession is at present particularly raised by it. I believe that it will undoubtedly be ultimately raised by it as soon as those men of whom I speak have in course of time died out.

6435. You are of course familiar with the fact that in all analogous legislation (for instance, on the passing of the Apothecaries Act in 1815) whenever a first register has had to be made, persons already *bonâ fide* in the position for which provision has had to be made, have been recognised as being entitled to registration?—I quite admit the whole difficulty.

6436. So that, in fact, unless that had been done, a first register could not have come into existence?—No, but I think it might have been made a little more exclusive.

6437. (*Professor Huxley.*)—Did I correctly understand you to say that you would desire legislation of such a nature as to forbid

anyone to practise Dentistry who is not on the Medical Register?—No, I did not mean to say that at all.

6438. You did not wish that?—No, not at all, only to prevent persons calling themselves surgeons who are not surgeons. I do not want to touch their right to practise as, or to call themselves, Dentists, but I think that no one ought to call himself Surgeon-Oculist, or Surgeon-Dentist, or surgeon anything, unless he be entitled to be on the Medical Register.

6439. (*Chairman.*)—We had here just now the representative of the British Dental Association, has your Association the same objects as the British Dental Association?—I think that the British Dental Association would differ very strongly from my view about the word "surgeon." I think they would like all those who are on the Dental Register to be allowed to call themselves Surgeon-Dentists. That is the main point of difference. We have to recognise legislation which has taken place. The Dentists Act has passed, and we recognise it, but we wish in future, if possible, to have some means by which the public can know whether or no a man is a surgeon who calls himself a Surgeon-Dentist, and whether when he calls himself a "Surgeon and practical Dentist" it means that he is a surgeon. In this case that I am referring to, of the man whose advertisement I have in my pocket, he is no surgeon at all, and he advertises and calls himself a "Surgeon and practical Dentist." The public gather from that that he is a surgeon, but he is not a surgeon, he is not on the Medical Register at all.

MR. RICHARD QUAIN, M.D., F.R.C.S., examined. (*Nov. 18th 1881.*)

6742. (*Chairman.*)—You are a member of the Senate of the University of London, and Fellow of the Royal College of Physicians?—Yes.

6743. And you have been a Crown nominee on the Medical Council since the year 1863?—Yes.

6744. And you have been secretary and chairman of the Pharmacopœia Committee of the Medical Council?—Yes.

6745. And you are treasurer, are you not, of the Council at the present time?—Yes, I have been one of the treasurers since 1863.

Having been examined at some length with regard to the constitution and working of the Medical Council and other matters affecting the medical profession, Dr. Quain was asked—

6932. Is there anything further that you wish to mention to the Commission?—I would venture to suggest that it would

be very desirable to amend the Dental Act. A great mistake has been made in appointing the general body of the Medical Council to carry out the details of this Act. In the Duke of Richmond's Bill there was a clause which gave the Council power to appoint a Board that would have carried out all those details without imposing the duty on the Council. This Board could have carried out those details in an inexpensive form. The Council according to the Duke of Richmond's Bill could have made rules which, when approved by the Privy Council, would have had the force of law. Instead of which the Dentists have chosen to adopt the Medical Act of 1858 as a model, an Act the amendment of which is the very subject under your consideration. It would be very desirable that the Act should be amended in accordance with the principle contained in the clause of the Duke of Richmond's late Bill (Clause 22, Medical Act, 1858, Amendment Bill, H.L.), and that in any amended Act there should be power taken to divide the Dentists into two classes, those who have a qualification by examination, and those who are only qualified on their own declaration. The Council is threatened with law proceedings on the subject. If it could be possible under the Amended Act to follow the example set in the Act obtained by the Veterinary Surgeons in the last session, in which all registered persons are divided into two classes, one, those who have obtained qualifications by examination, and the other by their own declaration, there would be an end of the present contention. The contention is that the Medical Council should take off the names of 400 people who have been put on the Register on their own declaration of being engaged in the practice of Dentistry prior to the passing of the Act. Their claim depends upon the interpretation of a very ill-worded section of the Act, and if this could be settled under an Amended Act by the persons registered being put into two divisions, it would be an advantage.

6933. Any person who chooses to call himself a practising dentist is entitled, is he not, to have his name put on the list?—Yes, coupled with the declaration that he is engaged in Dentistry or Dental Surgery. One of the questions which has arisen is whether a man who extracts 500 or 600 teeth a year, and who has been a dresser in a German hospital, can declare that he is a person *bonâ fide* engaged in the practice of Dentistry.

As already stated the only direct reference made in the Report

of the Commissioners to the evidence on Dental questions which had been given before them, is contained in the following paragraphs :—

63. The Association of Surgeons practising Dental Surgery appeared before us by their President, asking that qualified Dentists not on the Medical Register should be prevented from styling themselves "Surgeon-Dentists." We do not see our way to make such recommendation.

64. The British Dental Association have asked for direct representation upon the Medical Council. We cannot recommend that this should be granted.

OBITUARY NOTICE.

Joseph Thomas Clover, F.R.C.S.

THE death of Mr. Clover removes a figure that had become very familiar in the world of surgery, and especially so amongst the Dental practitioners of London.

Clover was born at Aylsham, in Norfolk, in 1825. He received his general education at Greyfriars Priory, Norwich, and then commenced his strictly professional education as a pupil of the late Mr. Gibson of that city. Subsequently he was made a dresser at the Norfolk and Norwich Hospital, and in 1844 came up to London and entered as a student at University College and Hospital. Here he distinguished himself, not so much in obtaining class prizes as in displaying that aptitude for clinical work that was so remarkable a feature of his later career as a practitioner. Whilst at University College he was successively dresser, clinical clerk, physician's assistant, then house surgeon to Morton, and in 1848 house surgeon to Syme. After this he was made resident medical officer to the hospital, and was offered a similar post at the Royal Infirmary Edinburgh, when Syme returned to the northern capital. This Clover was obliged to decline, remaining at the hospital in Gower Street, during the cholera epidemic of 1849. At this time he had already acquired considerable experience in the administration of chloroform, and after settling in 1853 in Cavendish Place, he devoted much of his time to the administration of anæsthetics, partly from inclination, and partly from delicate health unfitting him for general practice. He was lecturer at University College Hospital, on the subject he had chosen as a specialty and during

part of his professional life held the appointment of chloroformist to that institution as well as to Westminster Hospital. He also held the post of Administrator of Anæsthetics to the London Dental Hospital, and was a responsible member of the Committee of Management of that place until failing health compelled him to be absent. Clover rendered very valuable aid to the Chloroform Committee of the Medico-Chirurgical Society, although he was not a member of that Committee.

He was a contributor to the medical periodicals on many subjects connected with the special department that he had taken up, and in 1868 read a most valuable paper before the Odontological Society of Great Britain on the Administration of Chloroform in Dental Operations. But it was as a practical rather than as a literary contributor to the Science of Medicine and Surgery that he will be best remembered, although his inventions bore the distinct mark of his knowledge of the literature of those subjects. Many years ago his apparatus for clearing the bladder of the débris of a crushed calculus was accepted by Lithotritists as a most valuable appliance, perfecting, in some respects, Crampton's earlier invention, and in part anticipating the instruments more recently brought before the profession in America. It was, however, in the administration of anæsthetics that he achieved his highest reputation, and did most to replace chance by certainty and danger by security. The Chloroform Inhaler introduced in 1862 was a most important invention, as it gave the operator the means by which he could determine with perfect exactitude the percentage of chloroform to air that was being inhaled by the patient. This appliance, that worked so easily in its perfected form, was the result of long-continued and painstaking labour. In 1868 the Nitrous Oxide Inhaler now in use amongst most Dental Surgeons was brought out by him, and in 1876, a contrivance by which the anæsthesia produced by nitrous oxide could be prolonged through the agency of Ether, whilst to Clover must also be awarded the credit of first using these two agents in combination. Nor should we forget that we owe to the same fertile brain the simple but efficient form of instrument that may be used for depressing the tongue and preventing fragments of broken teeth or stumps from slipping down into the region of the glottis.

The personal character of Clover was one that is well worthy of careful study, more detailed in its nature than this article admits

of It must suffice to say here, that as an administrator of anæsthetics he was absolutely fearless, but it was the courage born of perfect knowledge and not the foolhardiness of ignorance; whilst another element in his success depended upon his readiness to meet disaster—for he always carried a tracheotomy tube in his pocket. He was never at a loss—never embarrassed and never, if he could possibly help it, unpunctual to an engagement. Always willing to learn if any new thing was brought forward, and always ready to teach all he knew to those who desired knowledge.

These qualities, that seem so trite and commonplace in writing of a dead man's career, were but the outward expressions of a strong individuality. Whole-hearted in his work, loyal and true in all the relationships of life, he made the routine of daily labour a high vocation, by helping to alleviate the pain of others whilst he himself was often so pitifully suffering. The writer of this article never heard him complain, although he many times saw the physical distress that Clover was manifestly enduring, and to the end this patience continued. His career must leave its impress upon his friends, and those who have worked with him—for he possessed in an eminent degree those qualities that in the domain of Surgery will always be most highly esteemed, and these were, a perfect knowledge of his subject, a conscientious discharge of his duties down to the minutest details, a receptive faculty that always took in any thing that was worth having, a critical faculty that gave to each element its due value, and an inventive faculty that enabled him to reduce and apply all his acquirements to the necessities of daily professional life. He spoke ill of no man and rarely did anyone speak even unkindly of him—he had many true friends and certainly no enemies. His widow and children must mourn over his loss, but they may rejoice in a memory that tells only the tale of usefulness to his generation and of love and respect from his fellows.

APPOINTMENTS.

MR. WILLOUGHBY WEISS, L.D.S. Eng., has been appointed Hon. Dental Surgeon to the Western General Dispensary, Marylebone Road, W.

MR. GEORGE COOKSEY, L.D.S., Eng., has been appointed Hon. Dental Surgeon to the Preston, County of Lancaster Royal Infirmary.

ANNOTATIONS.

WE much regret that the amount of space occupied by the extracts from the Blue Book of the Royal Commission on Medical Acts compels us to postpone till next month the publication of Mr. Cooke Parson's paper on "The Retention of Artificial Dentures," read at the Meeting of the Western Counties Branch at Cheltenham, which is in type, and was originally included in the make-up of the present number of this Journal.

THE Odontological Society of Great Britain will hold the opening Meeting of the Session 1882-3, at 40, Leicester Square, on Monday, November 6th, when Dr. Alfred Carpenter will read a paper, entitled, "A Consideration of some of the Causes which give rise to Dental Decay." Casual communications have been promised by Messrs. Charles Tomes, A. Coleman, and Henry Smith.

AT the following Meeting (December 4th) Mr. T. Charters White will read a paper on "The Salivary Glands of Insects."

THE following suggestion, which appears in the September number of the *Ohio State Journal of Dental Science*, is not altogether novel, and we fear that in some cases the wedging would cause the patient as much pain as would have been experienced from extraction in the usual manner. Still the plan may sometimes be worthy of trial in exceptional circumstances:—

A young lady, about fourteen years of age, called upon me with the canines very prominent, and desired a tooth extracted on either side, to give them a chance to fall into line. As other means seemed out of the question, whereby the deformity could be remedied, I decided on extracting the sixth year molars, which were decayed. I succeeded in extracting the left superior first molar, but it was so difficult that both operator and patient were perfectly willing to leave the other molar in the jaw. After a year had passed, I saw the patient again, and as the result was so satisfactory on that side of the mouth, the canine having dropped into line, it seemed very desirable that the other first molar should be extracted. But as we had not forgotten how difficult had been the operation before, we all dreaded this one. I thought I would try wedging the molar away from the bicuspid, with the hope

that it might be a little less difficult to extract. I placed as large a piece of rubber as possible between the first molar and second bicuspid, with instructions to call next morning. To my great surprise, the tooth came out with a very slight pull, though the roots were unusually long, and stood out like a three legged stool. I think it worth a trial when you have an unusually difficult tooth to extract.

THE American Dental Journals are still largely taken up with the Amalgam question. The *Ohio Journal* for last month contains no less than three articles on this subject, besides some editorial comments. In the *Missouri Dental Journal* for August is a paper on "Salivation from Amalgam Fillings," in which the author gives particulars of two cases to prove that mercury in an amalgam filling may produce symptoms analogous to those caused by the continued administration of the drug in other ways. The most remarkable of these cases is the following:—

Mrs. M., age twenty-seven, large, healthy, and well formed; had never been sick; never had any trouble with her stomach in any way; and one of the most cheerful persons of my acquaintance. She came to me June 5th; I removed pulp from inferior right sixth year molar, and treated for about two weeks (I never fill a tooth at the same time I remove the pulp), and then inserted a gutta-percha filling, which remained a week. When I removed the gutta-percha I filled the roots with diamond cement, and inserted a large amalgam filling. Up to this time everything had gone on as usual. A week later she returned, and complained of pain and soreness under the jaw, a peculiar taste in her mouth, loss of appetite, and an unpleasant sensation in the stomach; there was an inclination to vomit, which she controlled; she was very nervous and decidedly cross. I suspected the trouble, and after a local application, I requested her to return when she thought necessary. In three days she came back in a high state of excitement, accusing me of not properly preparing the cavity. Examination did not reveal any periostitis or ulitis. No pain on pressure. The metallic taste was more noticeable; and an increased flow of saliva was complained of. She informed me when she put her tongue over the filling she noticed an abatement of pain. I suggested the removal of the filling; as she acquiesced, I removed the filling, re-filled with cotton, applied tinc. iodine to the gums, and dismissed her. Four days more elapsed, and I filled with gutta-percha. From that time until now, August 15th, she has had no symptoms of salivation; metallic taste all gone; appetite has returned; pains have ceased entirely; in fact, she is as well as ever.

The symptoms were similar in the two foregoing cases; to my mind, the cause in both arose from mercury in the amalgam. Whether

the mercury was introduced into the system by volatization or by chemical change, I am not prepared to state. I am, however, of the opinion that these cases were the result of individual idiosyncrasies, and that the same fillings in the mouths of other persons differently constituted, would not have had the same effect.

To prevent nausea when taking impressions let the patient rinse the mouth thoroughly with camphor and water; five drops of spirits of camphor to a wine-glass of water is sufficient in most cases. Have used it so long and so successfully that we supposed everybody used it, until a few days since, when in conversation with several dentists we learned that no one of the number had ever tried it. One suggested that "it perhaps gave the mucous membrane something else to think of for the time being."—*New England Journal of Dentistry*.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Pray allow me the opportunity of correcting an error in my address, page 461 of the September Journal. Dr. Humphry's name is there wrongly given as a member of the Dental Committee of the Medical Council.

I remain, Yours, &c.

Caterham,

JOHN TOMES.

October 3rd, 1882.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to GEORGE BUTCHER, 4, Crane Court, Fleet Street, E.C.

It is particularly requested that all Correspondence for the Editor, Contributions for the Journal, Books for Review and Exchange Journals, should be addressed to 40, Leicester Square, London, W.C.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
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VOL. III.

**The Importance to the Dental Practitioner of a
Knowledge of Materia Medica and Therapeutics.**

ANY one who is practically acquainted with the working of the present scheme of education of the dental student, and with the nature of the examination by which that education is tested, cannot fail to pronounce both to be very good, sound, and practical. He has every opportunity of learning, under the best guidance, the scientific and the practical or manipulative side of his profession, and the result, as might be expected, is that the great majority of those who obtain the qualification are very well fitted to undertake the responsibilities of practice.

There is, however, one department in this educational scheme, in which we feel constrained to suggest there is still room for improvement, we allude to the teaching of Dental Therapeutics and Materia Medica. Although the present curriculum requires that the student should attend a course of Materia Medica at his general hospital, and thereby ensures his possessing such a knowledge of the

nature and properties of the remedies he will be called upon to employ as can be gathered from a general course,—a knowledge, no doubt, sufficient to guard him against any serious errors, to impress him, in fact, with caution,—yet we would urge that this is not enough. The use that a dental practitioner makes of *Materia Medica* is almost exclusively restricted to local applications, the particular remedies he employs are most often very potent, and the very fact that they are employed locally renders it necessary that they should be of considerable strength to produce any effect at all.

The ordinary course of lectures upon Therapeutics cannot possibly include a consideration of the special objects with which such drugs as arsenic and aconite are employed in dental practice, and inasmuch as these objects are peculiar to dentistry, so we feel that the time has arrived when it is incumbent upon the authorities to consider the advisability of systematising the teaching of Dental *Materia Medica* in our schools, and stringently examining candidates for the L.D.S. in this particular field of study.

In a recent American newspaper we read of a very incautious use of aconite by a practitioner who described himself as fully qualified.* His carelessness, which was egregious, was fraught with fatal results to the patient and just censure to himself. While we do not entertain any fears that accidents of a serious nature could arise in the practice of those who have acquired even such general lines of knowledge of *Materia Medica* as can be gathered from a course of lectures at a general hospital, still we are not disposed to rest satisfied with such negative cause for satisfaction.

* The aconite, which had been originally bought for a dog, was given in a bottle to a servant girl with instructions to apply it to her gum, this she did *every half hour* on cotton wool.

A glance at Mr. Stocken's excellent manual will show that the list of drugs which have special uses peculiar to our profession has already assumed formidable proportions, and every day adds to this list ; like all young sciences we are advancing very rapidly in all directions. Valuable researches are being made upon the action of the various agents used to devitalize the pulp (cf. Arkövy, Congress). Innumerable antiseptics are being employed to render roots aseptic,—carbolic acid, eucalyptus oil, iodoform, creasote, oil of cloves, &c.,—each having their special properties. We find Fleming's tincture of aconite constantly applied to the gums combined with tincture of iodine, in periostitis. The exact strengths and doses of these agents, and the rationale of their use are points of great importance, and we cannot but deprecate the empirical use of such remedies which is so likely to result from the absence of systematic teaching. The groundwork of general principles, and the general knowledge of *Materia Medica* at present enforced by the curriculum, must be supplemented by a well considered special course of lectures upon Dental Therapeutics and *Materia Medica* at the dental hospital. This course of lectures would be of more direct service to the student than that on almost any other branch of study, while the nature of the subject admits of its being fully discussed in lectures. *Materia Medica* lends itself to the lecture theatre ; it can scarcely be taught in any other way, any more than operative dentistry can be taught except by years of practical work at the chair, or mechanical dentistry elsewhere than in the workroom. We hope, therefore, that before long we shall hear that steps are being taken to appoint a series of lectures upon this subject. Until something of the sort is done, the authorities will be under the grave responsibility of allowing a very obvious defect in their system to remain unremedied.

The L.D.S. Examination at the Royal College of Surgeons.

THE progress of medical teaching may upon the whole be tolerably fairly gauged by the nature of the examinations which the student is called upon, and found able, to pass through. For example, the primary examination of the Royal College of Surgeons in anatomy and physiology was not many years ago conducted by the same examiners as the second or pass examination, whereas now it is not only placed in the hands of a different board of examiners, but there are separate examiners in anatomy and in physiology. This is an outcome of the vastly greater time and attention which is now given to the teaching of physiology in our medical schools, and, though there are some to be found who think this is not all clear gain, yet the majority will regard it as an unmistakeable sign of a real advance. We are pleased to be able to note a change in the same direction in the examination for the Dental Licentiatehip of the Royal College of Surgeons. It is only within the last few years that a practical examination has been added to the paper work and the *visû voce*, and in the form in which it was originally carried out, it was not of a very satisfactory nature. The candidates were allowed to prepare the cavities on a prior day; and not only did they naturally take good care that they should be easy cavities, but unless rumour spoke falsely, it was not an unknown practice to rehearse the procedures which were to take place under the examiner's eye by inserting fillings and removing them again, so as to ensure a full and undue familiarity with the particular cavity.

Then, too, the practical examination used to be conducted at the College of Surgeons, where the candidates worked under various disadvantages which must have added so many difficulties that the examiners could hardly have fairly expected an operator to do his best.

But now, for the last three examinations, this has all been changed: two practical examinations have been conducted at the Dental Hospital of London, and one at the National Dental Hospital; the candidates have never seen the patients before, and the examiners, distributing the patients haphazard, require any operation which they may select to be performed before them. The candidate has thus not the least idea which class of operation or operations he may be called upon to perform; he may have to insert

a difficult filling, by no means of his own choosing, or he may be judged by the manner in which he sets about and executes various less lengthy operations. And we believe that it is no secret that in future, as is only right, an increased weight will be attached to the practical part of the examination.

This is a matter for congratulation upon more than one account: we have urged with steady persistence the necessity for the devotion of a very large part of a student's time to the acquirement of that manipulative dexterity which is a *sine quâ non* for the dental practitioner, and it has been felt that the examination which concluded his period of pupilage did not adequately test whether he had done so or not. That the Dental Board of examiners have felt this and acted upon it will strengthen the hands of the teachers, and will both encourage and compel assiduity on the part of the students.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting at Liverpool.

Second Day, Saturday, August 27th.

THE proceedings commenced at nine o'clock with a visit to the Liverpool Dental Hospital, Mount Pleasant, where demonstrations in gold filling were given by Messrs. QUINBY (Liverpool), ROGERS (London), MATHESON (Manchester), BROWNE (Nottingham), and CUNNINGHAM (Cambridge). There was also on view an interesting exhibition of novelties in dental instruments, materials, and appliances, amongst the principal exhibitors being Messrs. Ash & Sons, London; the Dental Manufacturing Company, London and Manchester; Messrs. W. & J. Jamieson, London and Glasgow; and Mr. Hallam, London.

Mr. MATHESON, of Manchester, had on two previous visits dressed the exposed pulp of a left upper bicuspid; to-day, having adjusted the rubber dam, he prepared by means of the bur engine, an anterior proximal cavity; he then capped the nerve with osteoplastic mixed with a little carbolic acid, and when hardened packed with Nichol's pellets by hand pressure, producing a contour filling of much density and good shape, the result of three hours' severe work.

Mr. QUINBY, of Liverpool, prepared without dam, by hand

manipulation, a posterior palatine cavity in left upper central; his patient was placed low in the chair. By means of a mouth mirror Mr. Quinby excavated the cavity with great care and precision; Nichol's No. 6 soft foil was introduced by hand pressure around the walls of the cavity, then Jamieson's cylinders, rendered slightly cohesive by heat, were packed into centre of cavity. The operation, which was finished by hand burnishing, was intended to illustrate how a good plug may be introduced without rubber dam or mallet for an invalid or highly nervous patient.

Mr. CUNNINGHAM, of Cambridge, before commencing his clinic, made a few remarks by way of appendix to his paper read on Friday at the Institute. He spoke of his method of preparing amalgams, the necessity of screw retaining points, and the proper adjustment of platina rings around a carious tooth to enable him to make a perfect contour amalgam filling. He then prepared a cavity in a lower molar, walls much broken down, an irregular ugly-looking specimen of neglected caries, and filled it with osteo, illustrating his method of using his appliances with manifest skill and intelligence.

Mr. WALTER BROWNE, of Nottingham, encircled four upper central teeth with rubber dam, passing a silk ligature around the neck of each tooth. In the right central the front wall and posterior proximal surface were much broken down, with black caries extending to gum line; the cavity was prepared with bur engine, retaining pits drilled in floor, Kearsing's foil used in ribbon and packed with Butler's instruments by hand mallet. The points dwelt upon in this operation were three—retaining pits, continuing the gold packing into sound bone on crown of tooth, the careful handling and selection of pointed, footed, and serrated instruments.

Mr. CLAUDE ROGERS, of London, after adjusting the rubber dam, prepared with bur engine a posterior proximal cavity in a left central incisor; his grooves are to be well remembered. With the electric mallet, Kearsing's gold, prepared by folding into ribbon, was then packed into the cavity with ease and comfort to the patient rarely seen. A contour plug of absolute density was thus obtained as the result of two hours' work, having a very high finish, and the contour perfect.

At eleven o'clock the Members met in the large room of the

Medical Institute, Mount Pleasant, for the reading and discussion of papers, Mr. H. CAMPION, M.R.C.S. (president), in the chair.

Mr. BONNALIE (Chester), exhibited a new regulation plate, the idea of which was suggested by the ordinary vesta box. It was of very simple construction, being very similar to the ordinary vulcanite plate in which pivot-wood is used to push the irregular tooth, or teeth, into line. Instead of pivot-wood Mr. Bonnalie adapts a piece of strong dental alloy plate by means of a hinge to the vulcanite plate. The piece of plate is cut a little longer than the tooth to be moved. On the two edges, about midway, is a small saw cut, and at one end is soldered a piece of joint-wire. Through this is passed a fine wire, the ends of which are embedded in the vulcanite, forming a hinge. Under the hinge a hole is drilled in the vulcanite, and in the centre of the palate a second hole about half-an-inch from the first, into which a fine fret-saw is introduced, and two cuts made forming the letter V. An elastic band is slipped into the two cuts in the dental alloy plate, then through the hole under the hinge, and on through a second hole in palate, hitching on to the V-shaped cut. The result is to bring the small metal plate into a horizontal position. When the vulcanite plate is adjusted to the mouth, the piece of metal is pressed upwards, resting on the distal surface of the tooth, the elastic band exercising a pressure in an opposite direction. At night the plate is secured by ligature, thus keeping up a constant pressure on the irregular tooth.

Mr. MACLEOD (Edinburgh) then read the following communication :—

Why and where Models may be "Scraped" for the purpose of ensuring a better fit.

Some time ago the advisability of "scraping" models obtained from plaster or other impressions was revived by Mr. Austin Biggs at the Odonto-Chirurgical Society, and on that occasion was combated by myself and other members on the ground that as plaster gave a perfect impression it was impossible to improve upon perfection. A subsequent conversation with Mr. Biggs, in which he returned to the discussion of this subject, citing cases which had been benefited by the process, and pressing his views with an enthusiasm born of conviction, although he could not advance any scientific reason as to why it should be so, caused me to take the question into serious consideration.

The result is that I am now able to endorse Mr. Biggs' assertion, having, as I believe, discovered a reasonable and easily understood answer to the question: Why and where may models be scraped? and if the answer be a correct one, I trust it will be accepted as a small yet useful contribution to the more certain securing of perfect adaptation of dentures.

While still holding that with plaster you will get a perfect impression of any surface with which it is brought in contact, I have been forced to the conclusion that it is impossible with plaster, *or any other medium*, to obtain a perfect impression of the jaw, *per se*, to which we have to fit our case. For this reason, that in the act of impression taking you dislocate certain parts, which when the denture is inserted have resumed their natural relations; consequently in so far as the distance between the part in its state of dislocation and its normal position varies, you have more or less of a misfit. You are all aware that the mucous membrane which covers the labial and buccal surface of the alveolar border, and is reflected upon the lips and cheeks, as well as certain portions of the mucous membrane situated at the back of the hard palate are not infrequently unattached to the underlying structures.

Now when not so attached the muscular tension caused by opening the mouth and the insertion of the impression cup drags the unattached mucous membrane from the surface on which it lies, giving a distorted and therefore untrue replica of the jaw. It is to this untrue surface—of which we have obtained an exact copy—we make our denture. Is it a wonder, then, that when we place the case in the mouth we find spaces existing between the alveolar border and the denture? and between the posterior edge of the denture and the palate? How can we avoid this? The dislocation is not only not permanent, but it is not constant, and when present varies in degree; we must, therefore, ascertain the presence and amount of disturbance. First let us attend to the alveolar border, as the dislocation at the posterior border is more complex and requires a different treatment.

When the impression is set, lift up and push back upon the jaw the lips, which act will replace the membrane *in situ*; and as the differences between the edges of the impression and the gum, so much and in such position may you scrape your model. A little practice will soon teach the eye to judge correctly how much may be safely scraped away, and thus you will have a perfect adaption and avoid pinching, which is sure to result from blindly scraping the model all round the border.

In a similar way the contraction of the pillars of the fauces drags down the uvula and mucous membrane at the posterior edge of the hard palate, producing a more serious dislocation of the surface and one which it has puzzled the ingenuity of us all to overcome; and hitherto with but scant success, because, unlike that of the alveolar border, the conditions of displacement are natural and recurring and cannot be counterbalanced in every case by mechanical means. The "Fulsome Ridge" in one form or another has been the most successful method of overcoming this difficulty, and may be first tried, and if unsuccessful I offer as a certainty the following simple surgical treatment.

In the case of the alveolar border you can easily ascertain the amount of divergence and easily remedy it; there is no recurrence of the dislocation, the cause being mechanical and temporary, viz.: the presence of the impression cup and material. With the posterior palatine dislocation it is different, as it is produced at all times in the opening of the mouth and in inspiration by the contraction of the pillars of the fauces. To overcome this, I make the plate upon the model which has been scraped in front—*where necessary*—and also scraped across in the turn of the arch at the base of the internal border of the alveolus. In fitting in the plate, if there still exists a space between the plate and the palate, I make a T shaped—the head of the T running parallel with the posterior edge of the hard palate—or a X incision on each side of the median ridge. After washing the wound with alcohol or permanganate of potash, take some godiva or other hard composition and place it upon the palatine surface at the posterior edge of the denture, and when nearly hard put in the plate and squeeze it home, this will send the mucous membrane right up to the bone. The piece is held in position until the compo is quite hard, taken out and the superfluous portions trimmed off. The plate in this condition is then worn until the wounds have healed, when it will be found that the mucous membrane is adherent to the palate and that the contraction of the pillars of the fauces have no longer any disturbing influence. The centre of the denture can then be sawn out, an impression taken with the artificial teeth in the mouth and thereafter a new palate vulcanised in. Metal plates would of course require to be re-struck.

This method I can confidently recommend to you for trial, and trust that you will find that when all simpler means have failed this will ensure success.

Mr. COLES said he held that all the difficulties to which Mr. Macleod had drawn attention were overcome by telling the patient, after placing the plaster impression in the mouth, to close the mouth and bite firmly upon the impression cup with the lower teeth. This of course did not apply to gutta-percha and other plastic materials of that character requiring considerable pressure. If they used a well-fitting impression plate which did not impinge unequally on any surface of the mouth, and having filled it with plaster of Paris and put it in position, told the patient to close the teeth, they would avoid the displacement of mucous membrane which they were liable to have in the application of plaster or any other material, if during the time of taking the impression they made the patient keep the mouth wide open.

Mr. TURNER said when he first took plaster impressions he was in the habit of keeping the plaster very thin, because he thought that none of the parts of which he desired to get a correct transcript should be displaced at all; but Mr. Vasey told him that the plan he pursued was to get it as hard as he could into the mouth, sprinkle a little water on it to get a fine surface and then press it up into its place, and he had found that with a good fitting tray, that was the best mode of getting plaster impressions. If they indulged in scraping beyond a very limited extent they got a suction for a time, but they inflicted a great amount of discomfort on the patient. He had tried the scraping process on himself, and although it gave a fit, it was a fit of the same kind as that of a tight boot. He could stand pain about as well as anybody, but the fatigue of wearing that plate for two or three hours almost incapacitated him for work.

Mr. QUINBY (Liverpool) said he had found gutta-percha obtained from importers in its crude state, before anything was done in the way of purifying it, the best material for impressions. He preferred it to plaster under any circumstances; and the best way of using it was to get in the first instance an approximate impression. Take an ordinary tray which would nearly fit the mouth and get a very rough impression, pressing the gutta-percha with the fingers. When cool, put a little more gutta-percha over the surface and they would get a perfect impression, every outline distinctly marked as in plaster.

Mr. E. H. WILLIAMS (Manchester) exhibited a special tray for cleft palate. In many cases, he said he found it impossible to get a perfect impression with the trays purchased at the dépôts, and

in difficult cases he made his special tray in the following manner : First he took an impression with an ordinary tray and made his plaster cast. This he covered with one leaf of modelling wax, next oiled and laid over it another sheet of the same wax, and to this affixed a handle. He then trimmed up the outer wax until he had a tray to suit the case. He embedded the wax tray in plaster up to the top, and when it set, trimmed it and cut grooves or scooped hollows to steady the top. He then threw on a top of plaster, and when it set trimmed it and made a mouth at the extremity of the handle to pour the metal. The plaster must be very well dried and then painted with a coat of resin dissolved in methylated spirits, which acted as a flux and made the metal run. There must be vents to let the air escape. He tied the two plasters together and poured the metal through the mouth at the handle. Any old pewter would answer the purpose.

Mr. HENRY SEWILL then read the paper on "The Etiology and Pathology of Dental Diseases ; what we know, and what we would like to know," which appeared in the September and October numbers of this Journal.

Mr. OAKLEY COLES followed with a paper on "Dental Literature," which we shall have the pleasure of presenting to our readers before long.

Mr. S. J. HUTCHINSON's paper on "The Dental Diploma ; what it is, and what it is not," which will be found at p. 581 of our present issue, was then read by the Secretary. At its conclusion,

Mr. SHILLINGLAW said he thought the medical profession was rather too jealous of the dental profession attempting things beyond their province. A dentist was called upon to extract a tooth for an abscess ; had he not a right to treat that abscess, or must he send the patient to the next surgery for his further treatment ? He would say that the dentist should treat it, and that it was within his province whatever position he was in. Certainly it was in the province of the man possessing the qualification of L.D.S. ; they expected that a man who had obtained that qualification was well able to treat alveolar abscess. Then, in regard to administration of gas. He thought the dentist had a perfect right to give the gas without a medical man being present. They could count on their fingers the number of accidents which had taken place directly from the gas ; indeed, he believed only three cases could be pointed to in the whole history of its use.

Mr. COLEMAN was strongly opposed to the administration of nitrous oxide, safe as it might be, single-handed. He had had cases in which, had he been alone when administering it, the consequences might have been very serious. In one case, he was removing a molar from the mouth of a child six years old. His attention was engaged on the mouth, when he noticed that the child was not breathing. Had he been alone for half a minute, the pulse would have ceased, and had the pulse ceased, no power would have brought the child to life again. Again, some of his colleagues had had cases which had caused them great alarm. In one case, three minutes elapsed before respiration could be reproduced. He hoped, therefore, it would not go from that meeting that the administration of the gas single-handed was safe. It ought always to be administered in the presence of a second person, and, as a rule, that second person should be a medical practitioner.

Mr. SEWILL said they must not lose sight of the fact that there had been attempts in this country, as well as in America, to widen the field of dental surgery, which had, he thought, brought confusion into the profession. There had been an immense deal of wild writing on the subject, especially in America, and the writers had power to do harm in many ways. Their arch-enemy at the Medical Council had seized on these utterances in attempting to damage the prospects of the dental profession. If they wanted more legislation, they should take care that they did not give cause for these attacks. Regarding the use of gas, he thought a dental surgeon was justified in administering it, provided he had prepared himself for every emergency, and had assistants present who could assist him in an emergency. Legally, he was quite entitled to do it; but if his patient were dying, and he ran out for a surgeon, and, on coming back, found his patient dead, his conscience must certainly prick him in the future. Within the last fortnight he had a case in which a child four or five years of age nearly died under his hands in the presence of its mother, and he should not soon forget the shock it gave him. He did not think there was any difficulty in defining the limits of a dentist's duty. The old axiom, the translation of which was, "Let the cobbler stick to his last," was not a bad one applied to the dental profession. Let the dentist stick to his forceps.

Mr. GADDES said he did not think the limitations of dental surgery were so easily defined as some gentlemen seemed to suppose. Mr. Hutchinson deprecated the constitutional adminis-

tration of remedies, but where would he draw the line? He said that a dental surgeon might administer remedies locally, but in the local administration of aconite the physiological and therapeutic action of the remedy was not a local thing—it was a constitutional thing.

Mr. J. S. TURNER said that, generally speaking, he concurred in the views expressed by the author of the paper, although, perhaps, not entirely in his mode of expressing them. He thought that to those who were willing it was very easy to limit the scope of dental surgery. It was very easy to take exception to this, that, and the other thing, to split hairs, and to make difficulties, but he did not think there were half-a-dozen dentists in the whole profession—he doubted whether there were any—who had not in their minds a very clear idea of the limits of their profession.

The PRESIDENT said he would only make one remark with regard to the paper and the discussion that had taken place, and it was this—that he thought that, especially at the present time, they should do all they could to conciliate the general practitioners, and not offend them in any way. They were at the present time passing through a stage which he thought was very important for the future development of the dental profession, and, therefore, he thought it became them to be especially cautious, and not do anything in any way to bring them into collision with the medical profession. He was quite certain that if they treated the general practitioner in a gentlemanly way they would meet with similar treatment from him, and would ultimately derive a benefit from it, besides having the satisfaction of feeling that they had only done what was gentlemanly and right.

The PRESIDENT said the business of the meeting had now come to a close, but they must not separate without expressing, first of all, the thanks which were due from them to the Liverpool Medical Society for the handsome way in which they had treated the Association in lending them that building for their meetings. He begged to move “That the members and officers of the British Dental Association hereby record their deep sense of gratitude to the Council of the Liverpool Medical Institute for the generous manner in which their building has been placed at the disposal of the Association during the Annual General Meeting held in August, 1882, and they hereby request the Hon. Secretary of the

Reception Committee to convey this resolution to the Council of the Medical Institute."

The resolution was carried by acclamation.

The PRESIDENT next proposed a cordial vote of thanks to Dr. Waite, the Honorary Secretary of the Reception Committee, for his services. Only those, he said, who had been associated with him and knew his indefatigable energy, and the love and devotion he had for his profession and for the Association, could fully appreciate the time and trouble he had taken for their benefit during their visit to Liverpool.

The proposal was cordially received, and carried unanimously.

Dr. WAITE, in acknowledging the compliment, said it was right they should know that their thanks were due quite as much to other members of the Reception Committee as to himself. They were especially indebted to Major Stewart, for the presence of the chief magistrate of the city at their banquet the previous evening was entirely the result of that gentleman's vigorous exercise of his personal influence upon his worship. They were also indebted to Major Stewart for the musical entertainment they had during the dinner and afterwards. They were largely indebted, likewise, to Mr. C. T. Stewart and the assistant officers of the Liverpool Dental Hospital for the successful arrangements for the exhibition and demonstrations at that Institution. He was quite sure that they were all exceedingly glad that their united efforts had resulted in such a successful meeting. He might be allowed to say that he thought they ought in a very special manner to give vent to the feelings which they all cherished towards the General Secretary. No one could have any idea of the extent to which Mr. Smith Turner's time was taxed, and the tact, patience and energy with which he discharged the duties of the office he occupied with such distinguished success, and with such pleasure to them all. He begged to propose that a hearty vote of thanks be given to Mr. James Smith Turner, not only for his labours during the meeting, but for those labours which he had pursued so long and so successfully on behalf of the interests of the profession.

The motion was seconded by Mr. COLES, and carried by acclamation.

Mr. TURNER said he could not pretend to be unaffected by the kind manner in which the mention of his name and the services he had rendered to the profession had been received. He unfor-

unately began to be physically aware that he had worked too hard, but he could not help hoping that he might be able to go on a little longer, though he was glad to see that there were young men coming forward who would soon be able to relieve him of the work which had fallen upon him. It was not egotism which led him to speak in this way. His position was more or less accidental. In the political aspect of the question, he began by being Secretary of the Dental Reform Movement, which was looked upon hopefully by some few, but very doubtfully by the majority of the profession. Again and again he was told, "Mr. Turner, you will never do it." However, under the guidance of the Dental Reform Committee, they were able to do what was required, and, in working the measure through, he had probably acquired an amount of knowledge in reference to it which was useful at the present time. But he hoped that the need for all the knowledge of this intricate question would gradually pass away, and that the duties of Secretary of the Association would by-and-by be such as any one might easily take up, particularly with the special help which the Committee had liberally given him by appointing a paid Secretary.

The PRESIDENT said before they separated, he must trouble them with a few words more, for he thought he ought to say that, looking at what had been done during their two days' meeting, they might congratulate themselves on the fact that "progress" had been their motto, and that they had acted up to it most fully. They were now about to separate and disperse in different directions, north, south, east and west—some to enjoy their well-earned holidays, others to resume their active duties; but, in whichever direction they went, he felt certain that whenever the name of Liverpool was mentioned it would bring to their recollection the kind reception they had met with there. Although the simile was a very old one and nearly worn out, still he would say that he hoped they were parting only to meet again, like the two blades of a pair of scissors, and that when they did meet again they would meet as blades polished and sharpened by the holiday which they were anticipating, and also by the active discharge of the duties of their vocation for another twelve months. He trusted also that they would further, like the scissors, meet as sharp blades, to act side by side in carrying the object which they all had at heart, the well-being and future development of their profession. With these few remarks he wished them all good-bye.

On the proposition of Mr. VASEY a hearty vote of thanks was passed to the President, who, having acknowledged it, called upon the meeting to carry by acclamation a vote of thanks to the readers of papers and the gentlemen who had kindly taken an enormous amount of trouble to give them some interesting practical demonstrations.

The proceedings then terminated.

ORIGINAL COMMUNICATIONS.

The Retention of Artificial Dentures.*

BY T. COOK PARSON, M.R.C.S.ENG. L.D.S.I.

DENTAL SURGEON TO THE BRISTOL GENERAL HOSPITAL AND LECTURER ON
DENTAL MECHANICS AT UNIVERSITY COLLEGE, BRISTOL.

GENTLEMEN,—The object of this paper is the consideration of the best modes of retaining plates *in situ* without injury to the remaining natural teeth. The caries produced by the employment of clasps and stays of various kinds calls for a protest against their use, and an effort on our part to devise other means of attachment which shall have no such injurious effect.

We will briefly review the various methods of retaining artificial teeth in the mouth :—

Firstly, pivoting for single teeth. I will not detain you with a description of all the numerous devices and modes of performing this operation, but will consider a few of them. As a preliminary step we should ascertain the condition of health of the root to be used. If the nerve be still alive, no great difficulties will have to be overcome; it must be destroyed, either by a rapid turn of a drill forced at once to the apex of the root, or by the application of arsenic. The canal must then be cleared and sealed up. When this can be done without producing any inflammatory symptoms the succeeding steps may be taken. If the root to be pivoted contains a dead, decomposed nerve, or, should an abscess be associated, it must be thoroughly disinfected and treated until a healthy condition is re-established. The apex of the canal should now be filled with soft gold about one-fourth down, and the remainder prepared to receive the pivot. The point of most importance for the perma-

* Read at the Annual General Meeting of the Western Branch, at Cheltenham, August 6th.

nence of the operation is, that no portion of the surface of the root may be left exposed, whereby it may become softened and gradually destroyed by caries. My own *modus operandi* is to make use of a tube which has a thread cut on the outside, as used by Mr. Balkwill. They can be obtained at any of the dépôts. In conjunction with these screws I use flat discs of pure gold or platinum, thinned toward the edge, with a hole in the centre large enough for the screw, but not the screw head, to pass through. A small collar of gutta percha placed between the root and the disc will, when screwed into place, make a perfect joint; any surplus may be cut away, and the edges of the gold or platinum finally burnished down and finished. Should the root be so decayed that a thread can only be made for the upper part of the screw, amalgam or oxychloride may be used to keep it in position. I find Mr. Balkwill's split pins sometimes give way, so make mine solid and a trifle larger, taking the extra size from the thickness of the tube, to fasten in the crown. I roughen the pivot slightly, and press into place.

One of the most perfect methods is that invented by Dr. Bonwill; the operation is fully described in the journals, but requires some little practice for successful accomplishment. With these crowns bicuspid and molar roots may be restored and made useful for some years.

Another method practised by some first-class operators is to fix the crown and pivot by filling it in with cohesive gold, at the same time restoring the contour of the tooth.

A single lost tooth may also be fastened to the adjoining teeth on either side, should they both be decayed, a pivot being soldered transversely across the back of the tooth. Each end is bent to go into the decayed cavities on either side, and retained in position by means of cohesive fillings. A pivot is often found very useful in combination with other means of securing partial dentures in position. It may take the place of a band or stay which could not well be concealed from view. In all cases where a pivot is intended to be used, before taking the impression prepare your root. The difficulty now is to get the direction of the canal in your model. The only certain way of doing this is by using plaster for the impression, a pivot being placed in the canal in the root to give its direction and depth. A little practice will soon enable the operator to obtain a perfect impression.

I will next proceed with the consideration of bands, stays, and

wires. By their use great steadiness and firmness of the plate is obtained, and should they be hidden from view, a satisfactory case, at any rate for the time, is the result. There is, however, one very serious drawback, the results of which are continually presenting themselves to our notice, and of which our patients are becoming quite aware, and that is the action produced on the teeth clasped, decay being often produced by the chemical influence of decomposing debris of food left between the tooth and the clasp or other portions of the plate resting against the tooth. Patients now frequently stipulate that their artificial teeth shall not be fastened with wires, as they say they cut off the teeth which are made use of.

Should clasps be used, extreme cleanliness is the only safeguard. The difficulty in getting our patients to understand and act up to our instructions in this respect is very great, and I have abandoned as far as possible the use of clasps or stays, or any method which requires the plate to rest against the teeth at all.

I have, however, made a modification in the shape of the clasp which leaves the surface of the tooth almost free. Two methods having the same end in view are given in Harris's "Dental Surgery," one by Dr. Stokes, which consists in soldering gold tubes to the plate to carry wooden pivots, which are left slightly projecting to press against the mesial and distal walls of the tooth. This leaves the buccal and palatal surfaces quite free. The great disadvantage of this method is that the wooden pivots require frequently renewing, and also become impregnated with decomposed matter, which renders them very offensive. The gold tubes are also in the way in mounting, and food is retained round them. Another plan is recommended by Dr. Spalding, who uses thick narrow clasps secured to the palate by two or more standards. With long teeth, the spring is put high up on the tooth, whilst, on short teeth, the plate is to be filed away, except at the points necessary for the soldering of the clasp. In this way much of the tooth is left exposed to the cleansing action of the tongue. I have frequently tried this method, and in many cases it answers well; but the food accumulates about the standards, and in short teeth, such as you find with young patients between twenty and thirty, whose teeth it is most desirable to save, the clasp entirely covers that portion of the tooth which it is most desirable should be left exposed.

I will now demonstrate to you my own modification of clasps,

which has for its object the smallest possible contact with the tooth. I have with me a plate, which I will pass round to better illustrate this method to you. The plate is cut away from each tooth (even in lower plates this may be done, providing spiral springs are not used). In bending the clasps they should be made to fit on the gum round the tooth, but still to be quite free from pressing on it. One end must be soldered to the plate; the other end, which is to rest against the tooth, should have been previously fused into a small round knob and placed so as to catch on the tooth just below the most convex part of the posterior buccal surface; the antagonising knob is soldered to the plate, or to a standard if the tooth be long, and placed near the anterior palatine surface.

As is generally known, a ball resting on any surface only touches it at one point. The smallest amount of contact must therefore be obtained by this means, and should the food lodge at these points at most a small round cavity of decay would be formed which is very easy to fill. I have used this method almost exclusively where clasps have been required for the past three or four years, and have found it most successful. It is cleanly, easy of adjustment, and secures the plate quite as firmly as any clasp could do.

The next method of retaining plates is by suction, and is one which is becoming more used every day. It is most applicable in edentulous cases, but is now also largely used for partial cases. Our patients ask for it continually, as they say the plates so made do not decay their other teeth, and in this particular they are quite right, although, if a root is present, I prefer for small cases, to make use of a pivot or my own method, as more security is gained, and, instead of covering up the whole of the palate a small plate suffices.

The most important preliminary matter is the condition of the gums; it is very necessary that they should be got free from inflammation caused by diseased roots and badly-fitting plates, &c. The impression material should be of such consistence as to produce a model that will secure the artificial denture bearing equally all over the palate or, if anything, more upon the ridge. This end may be obtained in plaster by introducing it into the mouth whilst still very soft, should the ridge be hard and palate soft, or by waiting until the plaster has commenced to stiffen when the ridge is soft and palate hard; it can thus be made to compress the soft gums, or take the impression without in the least

displacing them. The firmness of the adhesion must depend entirely upon the plate being made to fit the model accurately; with vulcanite this is an easy matter, but with gold it is found much more difficult. I frequently combine the two materials, using gold for strength and rigidity, with an extremely thin layer of vulcanite covering it, for obtaining a perfect fit. I deem rigidity one of the most important features in suction pieces; of course if the plate is springy it alters in shape every time any pressure is exerted upon it. The teeth should be so arranged as to antagonise perfectly, the molar teeth being set so that the line of pressure does not fall outside the alveolar ridge.

In partial cases the plate should be cut entirely free from the the natural teeth and stumps (any stumps left in should be well filed down), so that as the piece sinks into the gums from the pressure of the lower teeth it may not bear unduly on any part, or be kept back at any one point by pressing on a projecting stump, so as to cause rocking. The use of suction chambers on an unyielding surface is, as a rule, unnecessary; an accurately fitting plate will be found to stay up as well without a cavity as with one. If made at all it should be shallow and rather large in size; it may then allow an indifferently fitting plate to work up closer to the ridge and prevent its rocking on the roof. In very flat mouths with scarcely any perceptible ridge, the cavity when filled with the gum tends to prevent lateral motion. Another device for obtaining more suction is by cutting a groove round the outside of the ridge—the Fulsome ridge—this I have found of value in some cases, giving more motion to the plate in mastication, without letting any air in.

Spiral springs are now almost a thing of the past. They are, however, extremely useful for temporary sets after the extraction of a great many roots, and where no teeth remain the plates cannot be retained in any other way for any length of time; the rapid alteration of the gums would soon loosen a suction plate. The use of springs necessitates a lower plate being made, and should no lower teeth have been lost a plate is made to cap the back teeth and give attachment for the springs. This method must now be considered a thing of the past. Springs are certainly preferable to a badly-fitting suction plate, which would be likely to suddenly drop on the tongue with every movement of the lips or cheeks.

Springs are troublesome from the fact that they are very liable to accident, and should one get broken an immediate visit to the dentist is necessitated; they are also apt to excoriate the cheeks,

especially when first worn, and also to cause the lower plate, when only the incisors are standing, to slide back out of place, causing the front portion of the plate behind the incisors to cut into the gum, the sinking also destroying the antagonism of the teeth.

The Dental Diploma: what it is, and what it is not.*

By S. J. HUTCHINSON, M.R.C.S., L.D.S.ENG.

This paper might be summed up in very few words, but this would not give the details which I am wishful to bring before this Association to-day.

It might be summarised thus:—The L.D.S. is a license to use the name of Dental Surgeon or its synonyms; but it is not a license to practise medicine, surgery, or pharmacy, nor to practise as an apothecary.

The L.D.S. is an evidence to the public that its possessor has, either by long practice and by examination, or by curriculum and examination, satisfied the Examiners of the Colleges of Surgeons of his fitness to practise dental surgery.

This at least was the intention of its founders in 1859, and such was also the intention of the Legislature in passing the Dental Act of 1878. Parliament, however, went beyond this in making the L.D.S. compulsory, now and in future, on all those who wish to use the title of dental surgeon or its synonyms, unless on the Medical Register. The law of the land also is jealous of the integrity of this title of dentist, and will not allow it, under penalty of fine or imprisonment, to be used by anyone whose name does not appear on the Medical or Dental Register. With regard to the Medical Register the law of the land is equally jealous, and allows no one to use any title which shall imply that he is entitled to be on this Register unless qualified, and the L.D.S. is *not* found amongst the qualifying list of diplomas and degrees.

True it is that all medical men are not compelled to be registered if in practice, but the corporations of the Colleges of Surgeons and of the Apothecaries' Company are guarded by their charters from infringement of their prerogative, and they in the one case allow no one to use the title "surgeon," and in the other no one can prescribe any medicine unless they are either licentiates of their company, or are qualified otherwise to be on the Medical Register.

All this may sound as if "Queen Anne were dead," but the whole question hinges upon this one point.

* Read at the Annual General Meeting of the Association at Liverpool, Aug. 27.

To take the apothecaries first; their charter gives them power to prosecute anyone prescribing medicines without possessing the necessary degree or diploma, and it is incontestable that the L.D.S. does not appear in the list of recognised diplomas or degrees. But it may be urged in answer to this that pharmacists are regularly in the habit of prescribing for ailments to the patients who come to their shops for relief. This may be true, and unfortunately it is so; but two wrongs do not make a right, and the chemist who orders medicines for a cough or a cold (often without seeing the patient), is equally in the wrong with the L.D.S. who prescribes for neuralgia when he can find no sufficient dental irritation. His duty is, clearly, to be sure that there is no dental irritation, or if there be to treat it locally, and then if these means fail, to write to the medical attendant of his patient, and request his co-operation in the treatment of the neuralgia. The reason for this caution may be here given, since it is quite evident that it never was intended by the Dental Act that dentists should act as quasi-apothecaries.

In the first place, the dental surgeon is not in a position, especially in the case of female patients, to acquire that confidential knowledge of their various conditions and ailments which the medical man must of necessity enquire into before giving any of the more potent drugs. Besides, is the dental surgeon prepared to follow up his treatment and visit the patients at their own homes, in his treatment of neuralgia, without being in consultation with the family doctor? because he cannot always rely upon his patient being able to leave the house, and then the family doctor would soon consider that the limitations of dental surgery had been overstepped.

Again, the dentist who has been successful in curing his patient of neuralgia by constitutional treatment, has a very great temptation put in his way to attempt to cure head-ache, which may perhaps be due to indigestion or constipation; and the patient, who finds he has obtained relief from the prescription of his dentist, naturally at a dental visit asks for relief of the head-ache, which may come from quite another cause than the idiopathic neuralgia. Patients often ask for something for their throat, if sore. I say the temptation to prescribe is then great; for to refuse would appear to the patient like an admission of ignorance. Whilst in the first case, that of neuralgia, nothing is easier than for the operator, after local treatment, to say to his patient "I have put your teeth in order, you must see if you are relieved, and if not there is some constitutional cause at work. I

should advise you to consult your family doctor, and if you like I will write him a note about the case."

To come now to the surgeon's aspect of the position ; here we have a different stand-point, because there is no law to prevent a man practising as a surgeon, the law only says that he may not call himself one unless qualified, he cannot give a certificate of death, and if a patient dies under his care he is liable for manslaughter, and he can be punished only if he wilfully and falsely represents himself to be a surgeon when he is not.

Now a dental surgeon is not a surgeon, and if he undertakes an operation out of his province he tacitly pretends to be a surgeon, and as wilfully and falsely represents himself to be one as if he had blazoned it forth to the world.

Later on I hope to define more exactly the province of dental surgery in accordance with my own views, but I desire here to quote from a leader on this subject which appeared in the *British Journal of Dental Science* for May 15th, 1882, page 491, which says—

"We cannot help remarking that this case once again points to the advisability of a surgeon *always* being present during operations under nitrous oxide gas, even if he himself is not the administrator. Had a medical man been in the room there would have been the possibility that by prompt action, and possibly by performance of tracheotomy, the life of the patient might have been saved. The accident which took place so seldom happens that it is practically lost sight of, but the bare fact that such a possibility exists is sufficient to show the absolute necessity of having qualified help at hand. We say 'qualified' advisedly, because under such circumstances a few minutes of most precious time (lost whilst a medical man is being sought) may mean the difference of life and death. Many a dentist under such circumstances could perform efficiently, if roughly, the operation of tracheotomy, but if his efforts—however well-meant—failed to save life, what terrible responsibilities might he not incur."

I would also quote a leader which appeared in the *Journal* of this Association for the same date, page 196—

"We do not for a moment suppose the medical profession would grudge the small gain which a dentist might occasionally find from the performance of a surgical operation ; but the leaders of the medical profession, and medical legislators would, nevertheless, certainly resent, and probably with effect, the usurpation of surgical practice by dentists.

"No doubt many dental surgeons have not only the knowledge, but also the skill necessary safely to perform such operations, and it might be alleged in the same way by advocates of unrestricted practice, that this knowledge is possessed by many who practise upon the public while possessing no diploma whatever.

"Law is, however, made for the protection of the public, and unless legal restrictions are jealously guarded, abuses must occur, and the public must often surely suffer.

"In addition to the inexpediency, on these grounds, of the course which this dentist thought fit to take, we consider that the grave responsibility involved in such a course is enough to deter the profession from following his example. In the first place there is always a danger, although of course remote in trivial operations, that a fatal issue may result, and in that case as the dental licentiate would be unable to give the usual certificate, an inquest would be held, and possibly a verdict of manslaughter returned against the operator. In the second place, in the event of the operation turning out badly, the practitioner would lay himself open to an action for malpraxis, an occurrence not at all unprecedented even in the experience of eminent surgeons, in the case of ungrateful patients. Under such circumstances the commonly accepted limits of dental practice must necessarily prejudice the defendant, who would be lucky if he escaped being mulcted in heavy damages. These and many other considerations which might be adduced may surely suffice to restrain dental surgeons from venturing upon any such dangerous ground as is involved in trespassing beyond the well-known limits of their specialty."

With regard to dental students making it their aim to acquire the M.R.C.S., as well as the L.D.S., I can only say, as Mr. Turner said at Cheltenham on August 6th, it is a very desirable ambition; but I do not hold that it is more expedient for an L.D.S. holding the M.R.C.S. to go out of his province as a dental surgeon than it is for a pure physician who happens to be F.R.C.S., as well as M.D. to perform an amputation.

But I do contend that the advantages of taking the M.R.C.S. are manifold, and chiefly that the course of study is, in itself, so interesting; the dresserships and clerkships and post-mortems give so much clearer an insight into disease and its treatment. The glorious study of practical physiology, which I hope before long will be compulsory for the L.D.S., and, above all, the feeling of equality with one's fellow-students, which the possession of the

M.R.C.S. confers, all these reasons should induce every student who can afford time and money to try for the two diplomas. But, gentlemen, let me state once and for all that I consider the L.D.S. an ample and sufficient qualification for the dental surgeon in general, and if the M.R.C.S. cannot be obtained without the sacrifice of time which could be more efficiently devoted to dentistry, then, I say, by all means let the L.D.S. come first and never mind the membership!

Now that Professor Turner's motion has been carried by the Medical Council, which allows time spent in the workroom to count for the curriculum before passing the examination in arts, a scheme which I advocated in the February number of the Association Journal, I say, now, the dental student has ample time to give to the thorough study of dental surgery, and can more easily obtain the M.R.C.S. also.

I have one word to say with regard to the L.D.S., and that is that I very much regret that more than one examining board has been created. I did hope that the "one portal system" for the L.D.S. would have been inaugurated with compulsory education and registration. Instead of this we find four examining bodies with varying tests and different standards of fitness, the result of which is that the one which has the lowest standard has sullied the fair fame of the L.D.S., and by conferring this diploma upon half-educated advertisers, in the company, I will say, of "good men and true," these last to their regret and mine are indelibly branded with the same mark as the black sheep themselves.

Let us trust, however, that the earnest protest of our Business Committee to the Medical Council may be productive of much good, and, if it cannot eradicate this foul blot, may it at least prevent the leprosy from spreading.

I should myself have preferred to have seen one examining board only, constituted of two representatives from each of the four centres, and I am in hope that the day is not far distant when some such plan will be adopted.

With regard to the Medical Council it seems that opinions are there divided as to the sphere of the dental surgeon.

At their meeting on July 8th, 1882, Dr. Quain quoted words used by me at a meeting of the Odontological Society last year, about dentists prescribing, but he went on to say:—"We have blindly created a class of partially educated practitioners, which will in the future give enormous trouble. We ought to have

guarded against it by a clear definition of what dentistry meant. This will be the result of our proceedings—to create a class of people who will think themselves fully competent to treat diseases constitutionally in every sense of the word.”

Dr. AQUILLA SMITH, however, replied: “Dr. Quain said something about the necessity of dentists being fully qualified for constitutional treatment. I do not think it would be worth while to introduce medical qualifications purely upon that view. I take it, that a gentleman who obtains a license, as a dentist, from the Royal College of Surgeons, would, from the education he has received as a surgeon, be fully qualified to undertake any constitutional treatment connected with dentistry.”

But, gentlemen, although he may be fully qualified, it does not necessarily mean that he must use his knowledge upon his patients, any more than a fully qualified medical man treats eyes, ears, and teeth, rather than send his patient to an oculist, an aurist, or a dentist.

Dr. Aquilla Smith only endorses the views of Mr. T. A. Rogers, who ruled, when President of the Odontological Society, that as long as a tooth was in the head, the dentist was justified in using constitutional treatment.

This is all very well, but does it mean that if a tumour is at the neck of and caused by a tooth, the tumour must be removed first and then the tooth, or must the tooth be removed, and then if the tumour does not disappear of its own accord, what is the next step? The tooth is not in the head but the tumour is. Can the L.D.S. then remove it, and the bone from which it springs?

I take it that he should not; therefore it is but logical to conclude he should not interfere with the tumour before removing the tooth, because although the tooth may be the exciting cause, yet the tumour affects the mouth proper, and a dental surgeon is not an oral surgeon.

But it will be answered against me that an L.D.S. is called upon to treat fractures of the jaws, also cleft palates, which are diseases of the mouth proper. But I maintain that as these cases nearly always come from medical men, the L.D.S. would be most wise if he undertook to treat fractures in co-operation with the surgeon, attending himself chiefly to the mechanical appliances necessary, and to the local treatment of discharges by suitable washes and injections.

Congenital cleft palates are purely local lesions requiring

mechanical treatment only, and it goes without saying that the L.D.S. should not attempt staphyloraphy, or to sew up a cut lip from an accident, nor yet a hare-lip. With regard to syphilitic disease and perforation of hard or soft palate, the constitutional treatment should, I maintain, be carried out by the surgeon, however much the L.D.S. may know about iodide of potassium and mercury. In nine cases out of ten these cases come to the L.D.S. by the recommendation of a medical man, who would not appreciate the attention of his dental friend in taking the constitutional treatment out of his hands. This, of course, no man in his senses would do in the nine cases, therefore why should he do it in the tenth? Would he not be wiser to return the compliment and send his tenth patient to his medical friend, who may have sent him the nine cases for the benefit of the special knowledge of the dentist.

By all means generalise the education of the L.D.S., but specialise his practice as much as you like.

Gentlemen, it is because I am such a believer in the L.D.S. as *the* qualification for a dentist, and because, I believe in the Dental Act and in the British Dental Association, that I implore you to weigh carefully my words, and to take away the sting of the reproach hurled at us by Dr. Quain, and let us not, in the future, be stigmatised as "a class of partially educated practitioners who consider themselves fully competent to treat diseases constitutionally in every sense of the word." I say, let us never give cause for this even to be hinted at about us, let us avoid the very appearance of evil, let us shield jealously the L.D.S. even from its friends, who would by this very undue zeal *discredit* it; let us stand forth to the Medical Council and to the world as a body of *fully-educated dental* practitioners, and, knowing our work, what it is and how to do it, let us do it with our might, proud of our leaders, proud of our L.D.S., won for us by their endeavours, and proud of our British Dental Association which jealously guards the honour of the L.D.S. !

At the Royal College of Surgeons of Edinburgh, during the October sittings of the Dental Examiners, Mr. William Thomas Elliott, of Diss, passed his first professional examination; and Messrs. Joseph Smithson Thomson, of Dublin, Henry Blandy, of Chesterfield, and Hume Purdie, of Alford, passed their final examination and were admitted Licentiates in Dental Surgery.

REVIEWS AND NOTICES OF BOOKS.

ELEMENTS OF DENTAL MATERIA MEDICA AND THERAPEUTICS. By JAMES STOCKEN, L.D.S.ENG., Assisted by THOMAS GADDES, L.D.S.ENG. & EDIN. Third edition. London, J. & A. Churchill, 1882, pp. 400, fcap. 8vo.

THE tendency of modern Text-books to increase in size appears to be irrepressible. The work which first appears as a modest hand-book, grows in the course of a few editions into a portly volume, until at last, by a process of fissiparous generation, twins are produced. At this point a fresh author generally takes up the subject and, greatly to the relief of the overburdened student, a new hand-book appears, only, however, to fall a victim in its turn to the inevitable tendency to aggrandisement: and so on, *ad infinitum*. Moreover, the better the original work and the more favourable its reception, the earlier, as a rule, is it attacked by, and the more rapid the progress of, the disease.

That the rapid advance of scientific discovery in these days renders this tendency difficult, and in some cases impossible, to avoid, is true; it is, however, one which must be looked upon as an evil, and the necessity for which must always be carefully inquired into.

The now well-known work, the title of which is quoted above, appears to be a case in point. Originally published just five years ago, it met an admitted want and was, as it deserved to be, well received. A second edition was soon called for; this, when it appeared, was found to be just twice the size of its predecessor; and now we are presented with a third edition which is again one-fourth larger than the second. The fact that, on the one hand, a knowledge of Dental Materia Medica is of the utmost importance to our students, and, on the other, that its study is at present almost entirely voluntary, renders this rapid growth, in our opinion, particularly unfortunate, since the increased bulk of the volume is likely to discourage many readers of good intentions, and, even when these prevail, to be followed by a less exact knowledge of its contents. We may be pardoned, then, if we examine the book with a somewhat critical eye in order to ascertain how much of this increase is really gain.

The author's original aim, as expressed in the preface to the first edition, was a good one. He says "there are elaborate

works on general *Materia Medica* and Pharmacology, but none having special reference to dentistry;" this want he proposes to supply. The book should, then, answer strictly to its title,—it should deal simply with *Dental Materia Medica*, having by way of introduction just such an account of general, or abstract pharmacology as may enable the student to understand the scope and bearings of the subject, and it should not attempt to rival the works of Ringer and Phillips. Looking at it from this point of view what do we find.

In the first place we have sixty pages of Introduction. With this there is not much fault to be found, except that the very formal style in which the matter is arranged gives it an appearance of dryness, and that a certain amount of condensation might be effected without much loss to the student. Next we have a brief, but clear, explanation of Chemical Notation, and then some Tables of Weights and Measures, &c., two or three of which (pp. 76, 77) are of very doubtful usefulness and might well be spared.

Then follows the "Special Pharmacology," which occupies a little more than half the book, and it is here we find most to criticise. The remedies specially used in dental practice are, of course, fully and well described, but we much doubt the necessity for devoting two pages to a description of the preparation and properties of Aloes, the same amount of space to the medicinal preparations of Bismuth, and so with regard to Ipecacuanha, Guaiacum, Nux Vomica, Stramonium and many other drugs which can have no direct connection with dental practice. We do not, of course, wish to suggest that all mention of such remedies should be omitted; dental practitioners should certainly have some knowledge of their properties and uses, even though they may seldom or never have occasion to order them in their practice; for instance, what dental practitioner, even in these days, is likely to prescribe Sulphate of Beberia or Jaborandi? But we believe that the necessary amount of information could be conveyed in one-fourth of the space which is now devoted to the description of these drugs, and that a good deal of this space is now occupied by matter which can only tend to perplex and weary the dental student.

Proceeding further we come to a "Dental Pharmacopœia," which occupies fifty pages and contains a large number of formulæ. These are, for the most part, well chosen, but we scarcely see the necessity for giving at full length the composition of British Phar-

macopœia preparations, such as the Pil. Rhei Comp. and Sp. Ammoniaë Aromaticus. Next we come to an "Index of Diseases," introduced for the first time in this edition, and "the advantages of which," we are told in the preface, "will be apparent." We regret to say that the advantages do not appear to us very clear. The student turns, say, to "Pulp, exposed," and he finds a list of twenty different remedies for this state of things, arranged in alphabetical order, with references to the page at which the action of each is described. But surely, instead of laboriously hunting up these references, it will be much easier for the student, or practitioner, to take down his "Dental Surgery," turn to the chapter on Exposed Pulp, and there under the head of "*Treatment*" he will probably at once find the information he requires. Finally we have a very full and useful Index of the ordinary character.

In conclusion it must be clearly understood that it is not the book we find fault with so much as the tendency. The book is a good book, and it is because we do not wish to see a good book spoilt that we call attention to what we believe to be a false tack before it has been followed very far. When the next edition is called for, as we hope and believe it will be in due course, we trust we shall find the size of the volume curtailed by at least as much as has been added on this occasion.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

Odontological Society of Great Britain.

THE first meeting of the present session took place at the Society's Rooms, 40, Leicester square, on Monday, the 6th inst., Mr. Samuel Lee Rymer, President, in the chair.

On taking his seat the PRESIDENT congratulated the Members on their generally improved appearance as the result of their recent vacations, and added that since their last meeting certain events had occurred to which he felt he ought to make some official reference. In the first place there was the Annual General Meeting of the British Dental Association at Liverpool. He felt sure that all who were present would agree with him that it was a most interesting meeting and highly successful, both from a scientific and a social point of view. He might further call attention to the fact that the success of that meeting was largely due to the interest taken in it by the Members of the Odontological Society,

for of those present about half were Members of that body, including no less than six past Presidents, and nearly all its present executive officers.

The next event was of a very different character. He referred to the death of Mr. J. T. Clover, whose services in connection with the administration of anæsthetics had made his name known throughout the world. He had been for ten years an honorary Member of the Society, and with his death many of its Members had lost a valued friend.

Quite recently the Society had lost another honorary Member. Mr. Alfred Canton was a man whose high professional attainments and kindly social bearing had endeared him to a large circle of friends. He had always taken a great interest in dental reform, and the valuable paper he had read before the Society not very long since would be at once in the minds of many of the Members present. He (Mr. Rymer) felt that they would at once agree to the suggestion of the Council that an expression of the sympathy of the Society should be conveyed to the relatives of the deceased Members. This was at once carried.

The PRESIDENT then announced the receipt of several donations to the library, including a copy of the recently published third edition of Mr. Stocken's "Dental Materia Medica."

Mr. COLEMAN showed a carious upper temporary molar which he had removed from the mouth of a little boy who had been suffering from convulsions for twenty-four hours previously. The fits ceased at once on the removal of the tooth. It looked as if the fits had been caused by dental irritation, but as the child had been at the same time subjected to medical treatment, it was impossible to say absolutely that the extraction and the cure stood in the relation of cause and effect. He also showed an upper wisdom tooth which he had removed about three weeks previously from the mouth of a gentleman eighty-nine years of age. The remarkable fact in the case was that it had only been erupted two years before, *i.e.*, when the patient was eighty-seven. This gentleman was also the subject of some remarkable exostoses on the lower jaw, the growth of which had at one time caused both Mr. Coleman and the patient some anxiety. Of late, however, these had certainly diminished in size, a fact which might be of some assistance to other Members if called upon to give a prognosis with regard to similar growths in elderly subjects.

Lastly, Mr. Coleman mentioned the case of a lady who came to

him to have a tooth pivotted. On removing the crown, instead of the decomposed pulp which he had expected to find, there was no pulp to be found at all, the whole of the cavity being filled up with secondary dentine. Finally Mr. Coleman drilled into the roots and found that their canals were also filled to the apices in the same way.

Mr. REDMAN showed an upper molar, the pulp cavity of which was almost completely filled by a mass of secondary dentine. The patient, a lady, had suffered for several years from pain which she referred to this tooth; but it appeared so thoroughly sound that none of the dentists whom she consulted would consent to extract it. Mr. Redman also could find no evidence of anything wrong until he directed a very strong light upon it. He then noticed that, whilst the neighbouring teeth appeared slightly transparent, this one was opaque, and he therefore diagnosed calcification of the pulp. An examination of the tooth after extraction showed this to be correct.

Mr. CHARLES TOMES said that in a paper which he had read at the meeting of the British Dental Association at Liverpool, on "The Influence of Septic Organisms on the Production of Dental Diseases," he had asked the question,—“do we ever get inflammation about the root of a dead tooth which is not of septic origin?” It was not an easy question to answer, but a valuable experiment was sometimes performed for us which afforded some aid towards a solution. No doubt most of those present had met with cases in which the pulp of a front tooth had been killed by a blow. The tooth was tender for a time, and sometimes an abscess formed, sometimes it did not. If no abscess occurred, the tooth might settle down and last for years, but sometimes an attack of periostitis would supervene and the tooth had to be extracted. He had lately had an opportunity of carefully examining such a tooth, which had been killed by an accident four years ago; it was tender, but there was no sign of abscess. On extraction there was clear evidence of inflammation about the apex of the root, but on splitting the tooth the remains of the pulp was found as a whitish mass, filling the pulp cavity, and not in the least offensive; nor could any bacteria be found in it. So far as it went, this case seemed to indicate the possibility of the existence of inflammation about the roots of dead teeth which was not of septic origin, but further evidence on this point was necessary, and he should be greatly obliged if any Member who might happen to meet with

a similar case would carefully note the state of the pulp immediately after extraction.

The PRESIDENT then called upon Dr. Alfred Carpenter to read the paper of the evening, entitled, "A Consideration of some of the Causes which lead to Dental Decay." This paper was a long, but very interesting one, and we regret that we are only able to give the barest outline of its contents:—

Dr. CARPENTER said he proposed in his paper to follow up the line of thought which he had always in mind respecting the causation of disease, and to consider that subject in relation to the teeth, since there was a field for observation and practice here as there was everywhere else in the domain of Medicine and Surgery.

A careful examination of ancient records showed that dental diseases were not of modern origin—dental caries was common enough amongst the ancients, though it was far from being so generally prevalent as was now the case—and there was sufficient evidence to show that luxury, indolence, and vice, tended very much to promote the development of such diseases.

Before discussing the principles upon which dental caries might depend, he would mention some of the conditions which, in his opinion, would be likely to favour the origin or progress of this disease. These causes were very various, and might either occur separately or several might be conjoined together. In the first place there could be no doubt as to the effects of inherited tendencies, such as the syphilitic and gouty, or of others, of a less distinctly marked character, which showed themselves in the form of defective nerve power or of inefficient nutritive force. Then there were the consequences of accidental injury to the foetus or to the young child, which might only develop their natural sequences years after the causes had ceased to exist. There were also causes connected with the simple wear and tear of the organ itself, or which might be induced by a wrong kind of food, by acts of indiscretion on the part of the mother or nurse, or of the family doctor in the administration of dangerous remedies, and in other ways. Improper food, in infant life, frequently laid the foundation of disease in the dental appendages, and when these followed upon those due to hereditary causes very serious results might follow. So also improper feeding in later life would have the same effect. The most marked example of this was seen in the swelling of the gums and loosening of the teeth which was produced by

scurvy, and though this disease was not now often met with in the form in which it had been common up to the beginning of this century, still slight cases, the nature of which was frequently not suspected, were not uncommon. The indulgence in a too highly nitrogenized diet, with deficiency of fruit and vegetables, also tended to produce the lithic acid diathesis, in which occurred the deposit of urate of soda in the peridental membrane, which was a frequent cause of disease of the teeth in gouty subjects.

Caries was probably also favoured by the conditions which promote tubercular tendencies. A minute particle of perverted protoplasm was laid down in the cell membrane which forms the dentine ; this protoplasm, instead of receiving the proper deposit of phosphate of lime, would develop a tendency to fatty degeneration. A single cell might be thus affected, or half a dozen cells. After a time these defective cells soften and a small hole is made in the tooth, which, if not remedied by the dentist, would give a *locus standi* to foreign bodies, to vibrios and to bacteria, and thus allow of assaults being made on the tissue which was still sound, and caries would thus arise. It was necessary for the best interests of the children of tubercular parents that their teeth should be frequently inspected by the dental surgeon, and that those punch-like holes should be cleared out and stopped. In such cases the conservative powers of the dental surgeon were very manifest. He should at the same time advise close attention to the rules which the obvious tendency to tubercle required, and should urge upon the parents to beware of the mischief which, unless due care was exercised, would be in store for these children ; for if evidence of perverted protoplasm was found in the dental organs, the same would probably be found in other tissues.

With regard to syphilitic children, Dr. Carpenter had noticed in families where the taint was undoubted, that those children who had defective teeth and skin eruptions, and in whom the defect had in consequence been recognised and all precautions taken against further mischief, had escaped the subsequent evils which had befallen other members of the family in whom the epithelial structures had not been at first affected. He had met with cases in which the teeth alone gave evidence of the taint, and such children had grown up in a fairly healthy condition, but he had seldom met with cases exhibiting tertiary eruptions, &c., in which clear evidence was not also afforded by the teeth. Similarly in the case of strumous children, when the morbid tendency had

showed itself in early life in the form of defective teeth and scaly or vesicular skin eruptions, the internal organs had escaped and the children, provided they were placed under good hygienic conditions, had grown up into healthy and well developed individuals; whilst other children of the same family, with clear skins and not showing any defect of the epidermic structures, had died in early life from cerebral or mesenteric disease of a tubercular character.

The effects of the gouty diathesis did not show themselves so markedly upon the teeth in early life as was the case with those of syphilis and tubercle; other tissues were more likely to suffer than the teeth. The conditions which produce gout were altogether different from those which resulted in syphilis or tuberculosis. They most often arose after the patient had attained his full growth, and his progeny in most cases were born into the world before the disease had made much progress in the parent. Still Dr. Carpenter was of opinion that the children of gouty parents were very liable to caries, and undoubtedly the subjects of the diseases were themselves specially liable to those periodontal inflammations which ultimately end in necrosis. Future history alone could show whether the children of total abstainers had any advantage over those of non-abstainers as regards soundness of teeth; but Dr. Carpenter had seen many instances proving that abstinence would do much towards saving the teeth of the goutily inclined, and he believed there was scarcely a greater mistake than the practice followed by many physicians of prescribing alcohol for the relief of dental neuralgia. The paralysis which the alcohol induced of the vessels supplying the sentient nerves did, indeed, give temporary relief, but the pain of to-morrow would be all the greater for the anæsthesia of to-day.

He had not sufficient knowledge of the effects of the rheumatic diathesis upon dental diseases, nor yet of those of the cancerous cachexia, to make any special allusion to these, but he thought that, with reference to the former especially, there was still a field open for observation, and he hoped that in this and other directions much might yet be learnt to increase that knowledge which had already made conservative surgery of more importance than heroic operations, which had materially diminished extractions, and which would in time render the prevention of disease of greater importance, even to the dental surgeon, than its radical cure could ever be.

The PRESIDENT having invited discussion,

Mr. OAKLEY COLES said he believed it to be quite impossible to discuss such an elaborate and interesting paper as that which they had just heard at that late period of the evening. He proposed that the discussion be deferred until the next meeting in order that Members might have the opportunity of reading the paper over carefully, and that they might have more time to do justice to the many important questions which it touched upon.

The PRESIDENT said Dr. Carpenter's paper was certainly a most important communication, containing many suggestive points for careful consideration. He was, therefore, very pleased to hear Mr. Coles' proposition, which he would at once put to the meeting.

The motion was at once agreed to, and the meeting adjourned accordingly.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Dr. Bodecker on Nerve-Capping.

THE September number of the *Cosmos* opens with the conclusion of a very interesting paper, read by Dr. C. F. W. Bödecker before the New York Odontological Society in April of this year. Dr. Bödecker's paper will well repay perusal; it is very clearly written, and he is careful to explain the exact process of experimental reasoning that led him to each of his conclusions, while he is not diffident in discussing previous errors of his own, and refuses to allow himself to adopt conclusions upon hasty inference or insufficient experiment. This third and last division of the paper deals mainly with the conditions in which it is, or is not, advisable to attempt to preserve the pulp of a diseased tooth. After pointing out that in the teeth of young persons, before the roots have finished growing, the loss of the pulp is almost equivalent to the loss of the tooth, while in persons of advanced age, in whose teeth the pulp is dwindled and anæmic, its loss is not such a serious matter, Dr. Bödecker discusses the degree of disorganisation, which, in his opinion, calls for the extirpation of the pulp of an adult. Two considerations seem to decide him in favour of extirpation, one when the whole pulp is inflamed, the other when pus has commenced to form. This is a plain rule enough, but we think that the author has over-estimated the importance of pus formation. A pus-forming surface may very easily be reduced to

perfect health by judicious and persistent antiseptic treatment, both in the pulp of a tooth and in any other connective tissue, *provided the cause of the pus formation be simply exposure*, and there is no reason to regard suppuration as a desperate sign if the conditions causing and maintaining it are removable. The three cases quoted by Bödecker are so elaborately recounted, that we much regret our inability, through want of space, to quote them at length. In the first, a tooth which had for a long time been rather sensitive was found to contain a large cavity, extending to the pulp and full of sensitive dentine. The patient had suffered from neuralgia. The pulp was killed, and on removal was found to contain a large pulp stone. The tooth was filled and the neuralgia disappeared. The second was a case of very acute inflammation of the pulp involving the periosteum, attended with constant neuralgia of all the left side and slight paralysis of the left arm. Dr. Bödecker applied carbolic acid, tannin, and morphia, to reduce the inflammation, and then destroyed the nerve with arsenic and removed it. The neuralgia and pain have since disappeared and have not returned for a year. The third case is another instance of a pulp-stone, or nodule of secondary dentine, treated, like the first, with satisfactory results.

We quite agree with Dr. Bödecker in disapproving of the use of strong carbolic acid except as an escharotic; its irritant qualities counterindicate it in most cases; we should recommend him to try eucalyptus oil, which is a great deal more powerful as a disinfectant, and has no irritant properties whatever. One axiom of Dr. Bödecker's cannot be too strongly enforced, namely, that "whenever a cavity is deep enough to admit of the interposition of cement and gutta percha between the metallic filling and the dentine, this protection should always be afforded." If this rule were always adhered to, a large proportion of the pain consequent upon such dental operations would be saved. Lastly, Dr. Bödecker gives his experience of iodoform in capping pulps; none of the teeth in which he has employed it have given any trouble since. He has found the agent very valuable in chronic alveolar abscesses; and as an injection into an inflamed antrum it had the result of preventing pus formation longer than any other agent he had previously used. In conclusion, we again heartily recommend the original article to the perusal of our readers.

Illustrative Cases of Disease of the Eye arising from Affections of the Teeth.

It is a familiar fact that serious disease of the eye may be caused through affections of the fifth nerve in its distribution to distant parts. The following four cases (from the practice of Dr. Roosa and myself) are offered in illustration of the subject, because they were very carefully observed, and because in each one the relation of cause and effect seems unmistakable. In all, the affection of the eye appeared to arise from irritation about the teeth.

CASE I.—*Paresis of Orbicularis Muscle—Irregular Spasm of Ciliary Muscle—Monocular Diplopia.*—Male, aged twenty-six. Complains that vision of right eye has suddenly become blurred, and that he sees double with that eye. No pain or redness. Pupil small and movable. Fundus normal. Has paresis of right orbicularis; lids cannot be completely closed, and eye is very watery. V. = $\frac{2}{3}$ and with $+\frac{1}{3}$ c. $180^\circ = \frac{2}{3}$. A careful examination of the teeth shows nothing abnormal.

Patient was ordered to take mercury and iodide of potash, which he did for some time without benefit. One night he was seized with severe pain in one of his upper molar teeth. The next day the tooth was extracted, and an abscess which had formed about its root was evacuated. Paresis of orbicularis muscle, diplopia, and astigmatism disappeared immediately, and V. became $\frac{2}{3}$ without any glass. There was no doubt about the astigmatism in this case, as the vision was subjected to the most careful tests.

CASE II.—*Paresis of Right Internal Rectus and Ciliary Muscles.*—Male, aged thirty-one. December 15, 1880; complains of blurring and "confusion" of vision of right eye of a week's duration. No redness or pain. Size and movements of pupil normal. Fundus normal. V. = $\frac{2}{3}$, with $+\frac{1}{3}$. Slight paresis of right internal rectus muscle. Slight paresis of accommodation, requiring $+\frac{1}{3}$ to restore normal range.

Root of first molar tooth of upper jaw, right side, is denuded, roughened, and sensitive. Patient was referred to a dentist, and was also treated with mercury and iodide of potash (there being a syphilitic history), and by electricity. Part of the root of the tooth was removed, and the remainder filled. The nerve of the tooth was found "dead," the alveolar process absorbed, and here was extensive suppuration in the adjacent parts. The ocular

paresis recovered immediately when the condition of the tooth was corrected (in the latter part of January), the other treatment having been abandoned for some time previously.

CASE III.—*Partial Paresis of Third Nerve*.—Female, aged forty. June 3, 1881, complains of confused feeling in right eye, which she cannot describe. Says it began with burning pain in the right ear and the right side of the head.

No redness of eye. Pupil dilated and immovable, and accommodation partially paralyzed. Opacities of both lenses. Teeth on right side are decayed and tender, and gums are in an unhealthy condition. Advised to consult a dentist.

June 9th.—Paresis of third nerve disappeared entirely after extraction of one tooth.

CASE IV.—*Inflammation of Conjunctiva and Sclera (?)*.—Male, aged thirty-three. January 20, 1882, complains of painful inflammation of left eye, which he has had for three weeks. Has had "neuralgia" of left side of face, most of the time, for the past month.

There is a patch of inflammation, involving conjunctiva, subconjunctival tissue, and apparently the sclerotic, at the lower and outer quadrant of the globe. It is about ten millimetres broad, and extends from the edge of the cornea to the retrotarsal fold. Its appearances are those of the affection ordinarily called episcleritis. There is lachrymation and localised ciliary tenderness. The pupil is small, but movable. Vision and accommodation normal. Fundus normal. Between first and second canine teeth of upper jaw, left side, is a small, ulcerated patch on the gum. Space between the teeth is very tender upon pressure with probe.

Patient was advised to consult a dentist, who found an exposed nerve in one of the canine teeth just referred to. An application was made to devitalise the nerve, and the facial neuralgia disappeared at once. The ocular inflammation disappeared completely within forty-eight hours. No local treatment for the eye was employed.—*Dr. Edward T. Ely, in New York Medical Record.*

The L.D.S.Eng. Examination Papers.

THE following are the questions which were set at the examination for the License in Dental Surgery of the Royal College of Surgeons of England, which was held last month. Candidates

were required to answer at least one of the two questions in each of the first set of papers, and two out of the three questions in the second pair.

Anatomy and Physiology: (1.) Describe the mechanism of the joint of the lower jaw, and enumerate the muscles by which each of its movements is effected. (2.) Describe the changes which take place in the heart during a single beat and pause of the pulse, and the sounds by which these changes are accompanied, indicating the causes of the latter.

Surgery and Pathology: (1.) What is meant by an "epulis"? What is the usual structure of such a tumour? and what treatment is appropriate for it on its original appearance, and on its recurrence? (2.) What means have been devised for the treatment of the more complicated cases of fracture of the jaw, and under what circumstances is each of these advisable?

Dental Anatomy and Physiology: (1.) What teeth are used as sources of ivory? Mention any peculiarities in the ivory derived from the several animals, especially in that which has been employed for dental purposes. (2.) Write a short description of the development, minute anatomy, and chemical composition of human dentine. How is its sensitiveness explained? (3.) Describe specimens 1 and 2 under the microscope.

Dental Surgery and Pathology: (1.) Name and briefly describe the tumours which have a dental origin. (2.) Mention some of the diseases and constitutional conditions which most markedly affect the teeth. What lesions do they respectively cause? (3.) What are the peculiarities of palladium, of Fletcher's and of Sullivan's amalgams, and of gold and tin foils used in combination? What differences in manipulation do the first three respectively require?

The following were the questions set at the previous (July) sittings of the Examiners:—

Anatomy and Physiology: (1.) Describe the palate bone and its connections. (2.) Describe the third division of the fifth pair of nerves, and specify the structures to which they are distributed.

Surgery and Pathology: (1.) What is the process by which union of an incised wound is effected? How can this process be best promoted? (2.) What do you understand by a dislocation of the jaw? What force produces it? How would you reduce it?

Dental Anatomy and Physiology: (1.) Describe the positions of

the crypts of the several permanent teeth, and their relation to the roots of the temporary teeth at the age of six years. State what teeth, complete and incomplete, are found in the jaws at that period. (2.) Give briefly the situation, function and minute anatomy of the tissues named respectively,—Nasmyth's membrane, *membrana preformativa*, and *membrana eboris*. (3.) Give the dental formulæ of man, old-world monkeys and new-world monkeys. Which teeth of the typical mammalian dentition are absent in them? In what respects do the teeth of the higher apes differ from those of man?

Dental Surgery and Pathology: (1.) In a case of crowded teeth in a contracted arch, mention the points to which you would give attention in deciding between the extraction of teeth and the expansion of the arch. How would you effect the latter? (2.) What is meant by impaction of teeth in the jaws? Which teeth are most frequently impacted, and why? (3.) What are the causes of hæmorrhage following tooth extraction? What methods of treatment are commonly pursued, and what are their respective advantages and disadvantages?

OBITUARY NOTICE.

Mr. Alfred George Canton, M.R.C.S. and L.D.S.Eng.
THE death of Mr. Alfred George Canton makes another gap in the body of men who took an active part in the early history of the reformation of our profession. Mr. Canton had, for several years, retired from active practice, and, in failing health, passed the remainder of his life in comparative seclusion in his home at Acton.

He was born in October, 1815, and at an early age became a pupil of Mr. Lemale. He studied at Charing Cross Hospital, and became a M.R.C.S.Eng. in 1843, and a L.D.S. in 1860. He was among those who advocated the establishment of a dental examination and diploma, and his name is attached to the memorial presented to the Royal College of Surgeons, in 1856, asking the Council to consider and take action in the matter. He was a member of the first Council of the Odontological Society, and held successively the offices of Secretary, Foreign Secretary and Vice-President; but, in 1873, owing to severe domestic affliction, he declined the Presidency, a refusal which was received by his

colleagues with the greatest reluctance and regret. In 1877 he was unanimously elected an honorary member of the Society. He died on October the 30th, aged sixty-seven. Owing to his lengthy seclusion, Mr. Canton will not be much missed by the present generation of practitioners, but the older members of the profession, and his family and friends best know what a valuable life it was which has closed.

The practice built up by the industry of the father is now ably carried on by the son, Mr. Frederick Canton, who, like his father, has also added additional qualifications to his L.D.S. diploma, and is, at present, the esteemed and efficient Secretary to the Council of the Odontological Society. And so we "live again in our children."

NEW INVENTIONS.

Whitehouse's Model Duplicating Composition.

THE accurate duplication of a model with any undercut, however slight, has hitherto only been accomplished by tedious core moulding and "part casting" in plaster, an operation which becomes difficult and uncertain as the intricacy and delicacy of the model increases. Elastic, gelatinous compounds used for copying minor works of plastic art, and particularly familiar in electrotype industries, do not afford sufficiently accurate results for dental purposes, on account of the shrinkage of the material and the difficulty of preventing its sticking to the model. The profession is, therefore, indebted to Mr. Walter Whitehouse, L.D.S. Edin., for a modification of this type of composition, which, containing no water, has less tendency to shrink and adhere to the model, and appears to give, with little trouble, very accurate and satisfactory results. Perhaps the only practical drawbacks to its use, are, the necessity of well steaming the model, and of waiting at least six hours for the material to set. With these exceptions the manipulations are simple and straightforward.

Where undercuts are not too great, a rapid method of duplicating with gutta-percha, described by Mr. Walter Coffin in a paper on that material read before the Odontological Society last session, seems very little known. It has the advantage of not involving any waste of time or preparation of the model; but is inapplicable in excessive undercut, or when long, frail, unsupported

teeth might be broken, and generally, for accuracy and certainty in all cases, cannot be compared with the elegant process and excellent material of Mr. Whitehouse.

ANNOTATIONS.

WE conclude in this number our report of the official proceedings at the meeting of the Association at Liverpool in August, but our account would not be complete without a brief reference to some of the unofficial proceedings. These included an inspection of the long line of docks, where vessels, merchandise and natives of all countries and of every language may be found. One party visited the Guion mail steamer *Alaska*, the fastest of the Atlantic liners, and were much interested in the examination of its ingeniously planned arrangements. Others made an excursion to New Brighton, where, amongst other things, they assisted at some excellent gun practice in the fort. Of the hospitalities of the Members of the Midland Branch, from the President downwards, we need say nothing,—it may be taken for granted. We can only add that when the time for separation arrived,—many of the Members starting for the Lakes and for Scotland,—one and all expressed warmly the pleasure and satisfaction they had derived from their visit to Liverpool, and their anticipations of other good times to come as year by year the Association visits fresh centres of industry and interest.

WHEN we say that we conclude in this number our report of the Liverpool Meeting, we must qualify our statement by the admission that though we have presented our readers with the cake, we have taken out some of the plums. We have still to publish the valuable papers of Messrs. Oakley Coles and Bowman Macleod, and the admirable address of Mr. Charles Tomes. We have also still on hand several of the papers read at the Western Branch Meeting at Cheltenham, which we shall publish side by side with those from Liverpool. We think our readers will agree with us that this is a more satisfactory arrangement than the former plan of crowding, immediately after the occurrence of a Branch meeting, all the papers read into one or two numbers of the Journal. In order to get three or four papers into one number it was frequently necessary to use small type, and individual papers often

received far less attention than they deserved. Our present plan does, indeed, call for the exercise of a little patience on the part both of authors and of expectant readers, but is, we believe, decidedly advantageous to both classes.

WE have heard it suggested, though perhaps it is foolish of us to repeat it, that our energetic local secretaries are sometimes inclined to cram too many plums into their cake. Thus at the meeting of the Western Branch at Cheltenham, the programme contained a list of no less than eight papers to be read in the course of a three hours' meeting. At Liverpool, also, although there was more time available, the programme was only got through by making the papers follow quickly one after the other. Now experience shows that in all societies it is only a small minority of members who can be induced to prepare or read papers, whilst amongst the majority many men possessed of valuable practical experience are to be found whose opinions can only be elicited in the course of a discussion. It will, of course, always be wise for the Secretary to have a full supply of papers on hand, so as to be provided against possible disappointments, but it does not follow that all the papers thus prepared must necessarily be read at the time, or "taken as read." As the number of our branches increases we shall be called upon to economise our resources both as regards authors and subjects, and in any case so much may generally be learnt by a general discussion on a practical subject that it is well to encourage the habit.

THE reports which we publish in this number of the Demonstrations which took place at the Liverpool Dental Hospital are of course of little value except as brief records of the nature of the work done. But of the value of the demonstrations themselves there cannot be two opinions; if there were any doubt upon this point we need only call attention to the remarks made by the President in his address at Liverpool, and by the President-elect at the Leeds meeting. Improvements are constantly being made in our professional appliances, and these either call for, or lead to, new methods of work. No doubt these new methods are always more or less fully described in the dental journals. Descriptions of manipulative processes are, however, both hard to write and difficult to follow; but once see the process carried out under your own eye and what was before almost unintelligible becomes

clear ; you go home and try it for yourself, and succeed either at once or after a little practice. We hope that in future these "clinics" will be considered as much a regular part of the business of our meetings as the addresses and papers have been hitherto.

At the Cheltenham Meeting, owing to the long programme mentioned above, the proposed demonstrations had to be almost entirely abandoned. Mr. Browne-Mason, of Exeter, did, however, manage to find time to perform two operations. He had previously prepared two cavities, one anterior in right upper canine, the other, a posterior palatal cavity in left canine. It was the latter filling which we had the opportunity of witnessing. It had been prepared by him to receive a non-cohesive filling, with slight undercuts ; good, sound walls.

Mr. Browne-Mason used Ash's non-cohesive soft foil, prepared in ropes of various sizes. This was introduced by hand pressure. The walls carefully packed, the body filled with similar ropes only passed through a spirit lamp and made slightly cohesive, the latter ropes being made quite cohesive by greater heat ; finished by hand burnisher. It was good, sound, faithful work, and a hard, well-finished plug was the result.

WE learn that there are ten new entries this session at the Dental Hospital of London and five at the National Dental Hospital. As this shows in both cases a falling off from last year's figures, it would be interesting to learn what number of students have entered at the various provincial schools, since it is probable that there is no real falling off in the number of students entering upon their professional studies, but that the increase in the number of centres of instruction is at length producing the effect upon the London schools which we have been looking forward to for the last two years. There is, however, little doubt that this falling off will only be temporary ; the natural increase which will take place in the number of students yearly entering the profession will soon restore the entries at the London schools to their old level without taking away from their provincial competitors.

WITH reference to the above it is only fair to state that at Edinburgh, the only school out of London from which we have as yet been able to get returns, the number of entries is exactly the same

as last year—viz. six. Six medical students have also entered for separate courses.

At the examinations for the License in Dental Surgery which took place at the Royal College of Surgeons of England on the 25th ult., the following twelve candidates were successful. An unlucky thirteenth was "referred" for a period of six months:—

Ackland, John McKno, Exeter, of the Dental and Charing Cross Hospitals.

Albert, Henry Louis, Sloane street, S.W., student of the Dental and St. George's Hospitals.

Andrew, J. J., Belfast; Bate, Frederick William, Alexandra road, N.W.; Cornelius, William Fryer, Teignmouth; Edwards, Richard, Pontdolgoch; Gould, Horace John, Exeter; Jester, Alfred Horace, Preston park, Brighton; Kissack, Frank Hill, Douglas, Isle of Man; Patterson, William Todd, Kingsland; Royston, Jonathan, Douglas, Isle of Man; all students of the Dental and Middlesex Hospitals.

Hughes, Morgan, Redhill, of the Dental and Westminster Hospitals.

On this occasion Mr. John Cooper Foster, Vice-president of the College, took his seat for the first time, having been elected a member of the Board of Dental Examiners at the meeting of the Council which took place on October 19th, in consequence of the vacancy caused by the resignation of Mr. John Birkett.

We regret to notice the death, in the prime of life, of Mr. Frank Ebbetts, L.D.S.Eng., late of Margaret Street, Cavendish Square; we understand that he fell a victim to typhoid fever. The sudden death of Mr. Thomas Clements, L.D.S.Eng., of Colville Road, Bayswater, is also much to be regretted. Mr. Clements was a member of the Odontological Society of Great Britain, Dental Surgeon to the Notting Hill Provident Dispensary, and was generally respected as a most hardworking and conscientious practitioner.

A FATAL accident caused by the bursting of a nitrous oxide gas bottle is reported in the *Times* of the 10th inst. The particulars as given are not very intelligible. It is said the bottle had been sent to an *optician's* in Bartlett's Buildings, Holborn, to be re-

paired, and that whilst one of the assistants was holding it over a stove it exploded, injuring the young man so severely that he died within a few hours. The most probable explanation is that the owner of the bottle had jammed the screw valve so tightly that he could not move it; but whatever the circumstances may have been, the moral of the story is that when anything is amiss, gas bottles should always be returned to the makers, and not handed over to be experimented upon in this reckless fashion by ignorant or inexperienced workmen.

WE understand that suggestions for the formation of a Benevolent Fund will be laid before the next meeting of the Representative Board.

THE first meeting of the Odonto-chirurgical Society of Scotland for the present Session took place on the 9th inst., at its rooms in Chambers Street, Edinburgh, Dr. Smith, President, in the chair. Several interesting cases having been brought forward by Members; a paper by Mr. Thomas Gaddes was read on "The Limitations of Dental Surgery." We must postpone a more detailed account of the meeting until next month.

WE are requested to give notice that the Annual Dinner of the Past and Present Students of the Dental Hospital of London will take place at the Freemasons' Tavern on Saturday, December 2nd, James Parkinson, Esq., in the chair. Gentlemen desirous of being present are requested to communicate with Mr. D. Hepburn, 9, Portland Place, W.

ALSO that the Annual Students' Dinner of the National Dental Hospital will take place on Thursday, November 23rd, at the Guildhall Tavern, Dr. Broadbent occupying the chair.

THE Romany Amateur Dramatic Club have kindly undertaken to give a performance at St. George's Hall, Regent Street, on Tuesday, December 19th, in aid of the funds of the Dental Hospital of London. The pieces announced are Messrs. Palgrave Simpson and H. Merivale's comedy, "Alone," and Mr. W. S. Gilbert's "Wedding March."

APPOINTMENTS.

WILLIAM HERN, M.R.C.S. and L.D.S.Eng., has been appointed Demonstrator of Gold Filling at the Dental Hospital of London, vice Mr. Claude Rogers, resigned.

Mr. H. CHARLES SMALE, L.D.S.Eng., of Oxford Street, Manchester has been appointed Honorary Dental Surgeon to the Ardwick and Ancoats Dispensary, and Ancoats Hospital, Manchester.

Mr. REES PRICE, L.D.S.Eng., has been appointed Hon. Dental Surgeon to the Sick Children's Hospital, Glasgow.

BOOKS RECEIVED:—

STOCKEN'S Dental Materia Medica, 3rd edition, J. & A. Churchill, London, 1882; **Essig's** Dental Metallurgy, S. S. White Dental Manufacturing Co., Philadelphia, 1882.

ANSWERS TO CORRESPONDENTS.

Mr. J. C. OLIVER, CARDIFF:—Yours is one of several communications we have received with reference to the proceedings of the Medical Council, but we believe our readers have heard enough on this subject for the present. Moreover, we are of opinion that as regards the particular business you mention, the Council did its best to arrive at a satisfactory conclusion, and we are not at all sure that this conclusion was a wrong one.

Mr. GABELL, REDHILL:—Your remarks on the septic properties of air are quite true, and there is no doubt that the success of the operation referred to would be assured if air could be excluded; but there are certain practical difficulties in the way, and you do not offer any suggestions as to how these can be surmounted.

Mr. T. BUCKLEY, HOLLINWOOD:—We are much obliged for the extract, which, however, we are not able to make use of at present.

TO CORRESPONDENTS.

NOTE.—**ANONYMOUS** letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to **GEORGE BUTCHER**, 4, Crane Court, Fleet Street, E.C.

ADVERTISERS are particularly requested to note that in future all communications relating to this department should be addressed to Messrs. J. & A. Churchill, New Burlington Street, Regent Street, W.

All communications for the Editor should be addressed to 40, Leicester Square, London, W.C.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. XII.

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VOL. III.

1882.—A Retrospect.

As the year draws to a close we all feel an irresistible impulse to turn over the leaves of the past and see what has been gained, or what has been lost, during the lapse of the twelve months which have passed away from us for ever. That we are progressing as a profession may be seen in the vitality exhibited by our dental hospitals and schools, both in London and throughout the kingdom at large. The annual course of business is recorded with satisfaction, and the examinations and annual prize distributions have been held with increasing interest both to the teachers and to the students. At the Royal College of Surgeons, while the tendency has been to increase the stringency of the dental examinations in every direction, the change has been more particularly manifested (perhaps because more easily observed), in the altered character of the practical part of the examinations, and it is gratifying to know that while

the severity and value of the test increases, the number of rejected candidates becomes less.

As Journalists we have endeavoured to keep a record of the principal events connected with our Association, and although at the close of the year we have to record the resignation of Mr. Coleman and Dr. Walker as joint editors of the Journal, we have still the satisfaction of knowing that we have their active co-operation in its management, and we believe we express the feelings of every Member of the British Dental Association when we say that these gentlemen have earned our deepest gratitude for their unsparing labours on our behalf.

The prolonged correspondence between the Association and the Medical Council has terminated in that body refusing to take any steps towards removing certain names from the Dentists' Register. It would be unprofitable at this time to review the unstable policy and erroneous statements of those who have been, let us hope, blind leaders of the sadly blind in this unfortunate course of evaded responsibility, but as there obviously are some Members of the Council who disapproved of an evasive policy, however inviting it may be to others, we advise our readers to look carefully to this part of the history of the bygone year as seen in our reports, and also as set forth in the late President's address at the Annual General Meeting of the Association. So far as this Association is concerned, we may consider the question virtually settled, and although we may have been wrongfully saddled thereby with a heavier obstructive burden than the Act required, it is beyond the most perverse ingenuity of our enemies to prevent gradual diminution and final extinction of the imposed incumbence. The Medical Council has, however, shown that it has both the will and power to correct the Dentists' Register when it can escape from the meshes of law-inter-

preters and would-be law-makers, and the decision that the first four years of study must follow the formal registration of the dental student after he has passed his preliminary examination in Arts, effectually prevents any degradation of the Dental Curriculum, at all events in the matter of time. The Council, too, has also declared that practising under an assumed name is unlawful and unprofessional, and it has also removed a forfeited qualification from the Register. It has also justly decided, notwithstanding persistent opposition from the usual source, to register any or all qualifications under schedule (A) of the Medical Act in the Dentists' Register as additional qualifications when held by registered dentists. At its sitting in July, the Association received from the Council permission to commence proceedings against two persons for the illegal use of the term dentist. It turned out that one name had no owner, and the owner of the other refuses to answer to his name, consequently he cannot at present be found. The experience gained in those two instances is by no means valueless, and it may serve as a caution to those who are constantly urging the Representative Board to rush into litigation on the smallest provocation.

During the past year the Scottish Branch of the Association has been established, and from the well-known activity of its principal supporters, it may be expected to exercise an important influence over the future of the Association.

The Eastern Counties' Dental Association is not yet affiliated to us, but we have reason to believe that the main obstacle to this very desirable consummation has been removed, so that we may ere long number four flourishing branches; and in view of certain alterations made in the Bye-Laws of the Odontological Society of Great Britain, we may venture to suggest that a Metropolitan Branch might prove a useful institution.

The First Annual General Meeting of the Association held out of London will make the past year a memorable one in its annals. Fortunate in the members of its local committee and especially fortunate in the presidency of Mr. Campion, of Manchester—whose generous self-abnegation has smoothed over many a point which might otherwise have been made a difficulty—the whole proceedings from beginning to end were one unbroken success ; and from our knowledge of the President elect and the materials of which the Western Counties' Branch is composed, we anticipate a like success next year.

The progress of the Odontological Society during the past year has been all that its warmest friends could have wished. In selecting Mr. Rymer as its president, the society honoured a gentleman who deserved well of his profession to a greater extent than is known to many of his present colleagues, and to the older members of the profession his elevation to the presidency was a matter of great and general satisfaction. This Society has now closed its doors to all but those who possess a registrable qualification, and we hope that from the students who yearly pass the examining boards, a sufficient number will be found to appreciate the advantages of membership, and to keep up and even to increase its present satisfactory list of members.

The Blue Book containing a report of the evidence given before the "Royal Commission on Medical Acts" has, as our readers know, been published. It is satisfactory to find that our plea for the maintenance of the Dentists Act has not been disregarded, and that the requests of those who seek to alter the Act have been refused. The refusal of the request for direct representation on the Medical Council made by the Association, was given on tangible grounds which, however, may not be permanent, or present a perpetual barrier to our wishes.

In our February issue of this year we predicted that the year now rapidly coming to a close, would be one of unusual scientific activity; but looking upon it as we now do, to see what we have to show in the way of results for the year's labour, we find very little indeed. Many subjects which we confidently hoped to have seen advanced a stage or two, remain to all appearance in *statu quo*; not because they are not being worked out, but rather because they are being conscientiously worked out, and because the conscientious working out of scientific problems is fraught with much failure, disappointment, and unlooked-for delay. Experimental research is the most coy and uncertain of mistresses, and can be wooed only by the most patient admirers. If, then, we have very little to say of the record of 1882, it does not follow that it has been a year of idleness, but that we must wait a little longer for the results of its work.

We have, however, a few achievements to record. The Liverpool meeting produced a paper from Mr. C. S. Tomes upon "Some of the Scientific Problems of the day," which will appear in our next issue. We have already published Mr. Sewill's paper upon "The Etiology and Pathology of Dental Diseases," in which some very valuable light was thrown upon the indirect causation of caries, while most of the existing knowledge of the subject was ably summed up. Mr. Coleman, at the same meeting, supplied some valuable evidence of the good results of antiseptic dressings on dead roots. Dr. Bödecker has advanced our knowledge upon the very practical point of nerve-capping in a paper published in the *Cosmos* (Sept., 1882), which we noticed in our last issue. Most of the contributions to the common stock of knowledge have, however, been of so slight and brief a nature that it is impossible to notice them in a general article. But on both sides of the Atlantic there

has been the usual abundance of lucubrations apparently patched up for the unworthy end of gaining notoriety for their authors ; the people who talk for the sake of talking have had their say, and old and abandoned materials have been dressed up in a cloud of verbiage and made to do duty for the hundredth time ; a sort of "pseudo-scientific trifling," as it has been pithily designated by a contemporary, that cannot be too strongly deprecated.

The Proposed Benevolent Fund.

THE circular elsewhere printed embodies the views of the somewhat large and influential committee appointed by the Representative Board to consider this question. That the Committee is a thoroughly representative one may be gathered from the following list of members—Messrs. E. Saunders, S. L. Rymer, T. A. Rogers, A. J. Woodhouse, J. Dennant, C. Sims, W. H. Waite, R. Rogers and the Hon. Sec. Only four of these gentlemen reside in London, and two of the provincial members, Messrs. Sims and Dennant, are the gentlemen who, on a previous occasion, reported to the Board on the formation of a Benevolent Fund. The first report, we believe, counselled delay, owing to the then unsettled state of the profession and the immature stage of development at which the Association had arrived. On this occasion the Committee is of opinion that the formation of a Benevolent Fund might now be attempted with advantage. That the Committee clearly understands the magnitude of the task which the profession has before it, is clearly seen from the bold but business-like statement of the amount of money required, if relief to a certain extent is to be given to a certain number of necessitous cases. Of course we do not for a moment suppose that the Committee will refuse to act on a more modest scale than that indicated in the printed circular, but we think it wise to place these broad figures before the profession so that the members may see at once what a certain sum will do for their benevolent purposes.

It is too much the fashion to call out for a Benevolent Fund whenever an isolated case of distress comes under our notice, as if the existence of such a fund would at once solve the difficulty of relieving the sufferers ; but a reference to the figures stated by

the Committee will show at once that a fund means more than a name, and that the Committee has not in contemplation merely the relief of sporadic cases of distress such as now and then form the basis of philanthropical articles in our journals, but that continued steady drain on its resources which is sure to arise if ever the fund becomes a permanent institution. We sincerely trust that the response to this appeal may encourage the Representative Board to go further in this business, and, as the Committee suggest, draw up bye-laws for the acceptance of the Association, the members of which have now the question placed in their own hands for settlement.

ASSOCIATION INTELLIGENCE.

Meeting of the Representative Board.

THE Representative Board met on Saturday, the 2nd inst. In the course of the business arising out of the minutes, the Secretary said that he hoped the reprint of the Transactions of the Association Meeting at Liverpool would be issued early next year. The report of the Committee appointed to arrange a Benevolent Fund was received, and it was resolved by the Representative Board to receive the circular as recommended by the Committee, and send a copy to each member of the Association. A copy of the circular will be found below.

Dr. Walker formally resigned his editorship of the Journal of the Association. After accõrding a vote of thanks to Dr. Walker for his services the Board adjourned.

The Benevolent Fund Circular.

THE following is the circular referred to above as having been drawn up by the Benevolent Fund Sub-committee and approved by the Representative Board. A copy of it will shortly be sent to every member of the Association, and will, we trust, meet with a satisfactory response :—

BRITISH DENTAL ASSOCIATION.

40, *Leicester Square*,
London, W.C.

DEAR SIR,—It is proposed to establish a Benevolent Fund in

connection with the British Dental Association on the following basis :—

The fund to be managed by a standing committee of the Members of the British Dental Association, who shall enquire into and decide on the merits of each case brought before them. Each case, whether relieved or not, shall be considered strictly confidential, and any help afforded shall be made privately.

The recipients of aid need not be Members of the British Dental Association, nor being Members of the British Dental Association need they be subscribers to the fund, but in all cases the Members of the British Dental Association or their dependents shall have a preference.

It is considered that a capital sum of £5,000, and a subscription list yielding £250 per annum, ought soon to be attainable, thus permitting the distribution of substantial relief to many deserving cases.*

It is beyond the limits of a preliminary circular to enter into further details of organisation, but in the event of the Representative Board receiving sufficient encouragement from the members of the Association to justify the necessary expenditure, a provisional code of laws could be drawn up, and a copy sent to each member, and then submitted to the next general meeting for amendment or adoption.

Will you kindly state on the accompanying form the amount you are prepared to give as a donation to the capital fund, and the amount per annum you will give as a yearly subscription, and return it to me.

Yours &c., &c.,

J. S. TURNER,

Hon. Sec.

At the recent meeting of the Representative Board it was mentioned by Dr. Waite, of Liverpool, that the members of the Midland Counties Branch are endeavouring to arrange certain meetings at the houses of different members for the interchange of ideas, and the discussion of any questions which may arise regarding the progress of the profession. Such a scheme requires no recommendation from us, and we wish it every success.

* A capital sum of £5,000 invested at 5 per cent. would yield £250, and an additional subscription of a like amount would admit of £20 per annum being paid to 22 cases, and leave a small margin for casual cases and expenses.

ORIGINAL COMMUNICATIONS.

Mechanical Dentistry, its Progress and Possibilities.*

BY W. BOWMAN MACLEOD, L.D.S.Edin.,

DENTAL SURGEON TO THE EDINBURGH DENTAL HOSPITAL AND LECTURER
ON DENTAL MECHANICS AT THE EDINBURGH DENTAL SCHOOL.

IN dealing with the subject of mechanical dentistry, its progress and possibilities, in the necessarily limited time placed at my disposal, it is quite impossible that all can be said that should or could be said; nor is it, under the circumstances, necessary that an attempt in this direction should be made, as this paper is not intended to present an exhaustive or even a comprehensive review of the rise and progress of our art, nor to project an elaborate forecast of the future which awaits our speciality, but rather lightly to trace such a broad and general retrospect and prospect as may pleasantly introduce the practical papers and demonstrations which are to be laid before the members of the Association in the Mechanical Section at this our second annual Conference.

When, where, and how the first call was made upon the ingenuity of man to replace a lost dental organ is a fact in the world's history which was either deemed unworthy of record, or like many other equally important matters has been lost in the mists of antiquity.

That ours is an ancient art we have in proof, evidence circumstantial and actual.

It would be a libel on the craftiness of the Semitic race to say that a people who had in their penal code the forfeiture of a tooth for a tooth, lacked the ingenuity to veil their transgressions from the general ken, by filling up the gap which the law had made. From the poets we learn that in ancient Rome the dentist was called upon to replace the lost pearls of which time, disease, or accident had bereft the mouth of beauty. Martial states sarcastically in one of his epigrams that Thais's teeth were discoloured, while those of Lecanias were white as driven snow, and gives as the reason for this contrast that the teeth of the former were her own, while the latter adorned her mouth with ~~those of some other~~ *pieces of wood* ~~body.~~ *and*

But legal evidence so far as the Romans are concerned, places the matter beyond doubt that they were acquainted with our art.

* Read at the Annual General Meeting of the Association, at Liverpool, August 26th, 1882.

In their Mortuary Laws which enacted what might and what might not be carried with the deceased to his last home, there is a special clause of exemption in favour of and permitting the gold settings of false teeth to be buried with the body. That the Greeks were not one whit behind the Romans in this luxury of civilisation may be gathered from the many allusions made by the classic writers to the teeth. Moreover, prior to these records of the Greek, the Roman and the Jew, we can find warrant for saying that artificial substitutes were not unknown, for we have presumptive evidence that the Hindoo and the Egyptian were not exempt from the dental woes of humanity, nor ignorant of a method of replacement. But to whom belongs the supremacy of priority we know not, and it is a matter which, as an active, living, progressing profession, concerns us but little, although it may be of more interest to the practitioners of this city, which is reputed to possess in one of its museums a unique example—and possibly the most ancient specimen extant—of a partial denture carved from the wood of the sycamore, which was appropriated by some wandering antiquary from the unconscious mouth of a fragrant mummy, who, perchance, was a reigning beauty in the court of one of Egypt's ancient kings.

However far back the practice of our art reached into the anni B.C., the short retrospect of less than three centuries Anno Domini, will carry us back to the limits within which we can glean any record of a dental void being made good by the insertion of a substitute within the British realms. In the State Records of Scotland we have, among other notes of the expenditure of King James the IV., several items such as: "Item, To ane fallow because the King pullit furth his twtth, xviii. shillings. Item, to Kinnard the barbour for twa teith drawin furtht of his hed by the King, xviii. shillings," &c., and it is not too much to suppose that there would follow in the wake of such a royal extractor some equally ingenious, if not so exalted, a personage, who for some small consideration either received or given, would make good the breach which his Majesty had made. In Blagrave's Mathematical Jewel, published in the reign of the good Queen Bess, we are informed that Sir John Blagrave "caused all his teeth to be drawne out, and after had a set of Ivory in agayne."

Ben Jonson, in his play of "Epicœne, or the Silent Woman," published in 1609, makes one of his characters, a certain Captain Thomas Otter, who was henpecked, but who ruled his own house

and his wife most valiantly when away from home, say in Act IV., scene ii., about this wife of his : "She has a most vile face, and yet she spends me forty pounds a year in mercury and hog's bones. All her teeth were made in the Blackfriars, both her eye-brows in the Strand and her hair in Silver Street. Every part of the town owns a piece of her."

A century afterwards brings us down to the first public announcement of a person following the pursuit of mechanical dentistry as a distinct profession. "An Ephemerides entitled, 'The Ladies' Diary or the Woman's Almanack,' for the year of our Lord, 1709, being the first year after leap year, containing many delightful and entertaining particulars peculiarly adapted for the use and diversion of the fair sex ; being the sixth almanack ever published of that kind " contains the following notification :

"Artificial teeth set in so well as to eat with them, and not to be discovered from natural, nor to be taken out at night, as is by some falsely suggested, but may be worn years together. They are an ornament to the mouth, and help the speech. Also teeth cleaned and drawne. By John Watts, Operator, who applies himself wholly to the said business and lives in Racquet Court, Fleet Street." A modest form of announcement which might be commended to the notice of the Advertiser of the present day. From this time forward we may begin to recognise the gradual development of our art as a specialty, and if it is an absolute axiom that we can measure supply by demand and value by utility, we might well wonder at the slow progress made by our art at this period. For it was not until the close of the eighteenth and beginning of the nineteenth century that that adaptation of means towards end, which alone can command an intelligent recognition of the necessity of our existence as a distinct and useful profession, began to engage the serious attention of dental practitioners.

But if we wonder at the slow progress of our art at this period, a little reflection will modify our wonder when we consider that each individual pursued an isolated course, and was dependent for his initial knowledge upon oral tradition recited to him by a single preceptor, who might be good, bad or indifferent, and seldom imparted more to his pupil than might be useful in serving his own immediate interests and necessities, and if thus our wonder be modified, we may well be astonished as we look upon the many examples of high artistic manipulation which still survive in our museums, and bear witness to the consummate mastery which

many attained in the skilful adaptation of materials so refractory and unsuitable.

Hitherto the mechanical services of the dentist had been confined to the replacement of lost organs, and the media of his expression limited by the employment of the tusk of the hippopotamus, the walrus, and the elephant, or the teeth of the sheep, the hog, and the cow, or those of his fellow man, which last he obtained occasionally by purchase from some necessitous brother, but more frequently by sacrilegiously rifling the tombs of his ancestors, or looting the oral cavities of those who fell on the field of battle.

The expiring years of the eighteenth, and the birth years of the present, century saw the dawn of a new stage in the progress of mechanical dentistry in the first attempts to find an enduring life-like and incorruptible material from which to fashion the successors of the lost organs, and to the French we are indebted for the first essays in the field of ceramics, which under the patient and continuous experimental efforts of many workers in our own country and in America have been productive of a composition having capabilities which may enable the artificer to produce an imitation which in its concealment of art leaves little to be desired.

Along side of, and progressive with, the development of the capabilities of porcelain came the substitution of metal for bone in the construction of base plates, followed in time by the introduction of gutta-percha, cheoplasty, vulcanite and celluloid. Although during the first quarter of this century there was a decided movement of progress in a forward direction, there was little lateral development until, in the second quarter, the forward men of the day began to break down the individual isolation of practitioners by the interchange of ideas through the press, and the publication of manuals for instruction in Dental Mechanics.

In the third quarter the progress both lateral and forward was further developed by the establishment of societies, at the meetings of which the last improvement, and the latest invention was delivered warm from the lips of the man whose brain had conceived the originality.

Nor has the short period which has gone of the present and final quarter been less productive than any of its predecessors. Though but a third of the quarter has expired, I think we may claim that more has been done during that third for the advancement of mechanical dentistry than during any previous quarter.

Until the second quarter of the century the attention of the mechanical dentist was mainly confined to the insertion of artificial substitutes, with now and then an isolated attempt to make good the ravages of palatine disease by the insertion of an obturator, ingenious and intricate in construction, and wonderful as an example of pure mechanism, but very unsatisfactory as a functional replacement.

Gradually, however, under the influence of interchange of ideas through the media already noticed, the resources of the dentist multiplied, and with the amplification of his resources came the gradual extension of the application of his skill to the regulation of congenital deformities, the supplementing of congenital or accidental defects, and the construction of apparatus for the adjustment, and restoration to a normal state, of lesions caused by fracture, &c.

In short it is now recognised as within the province of mechanical dentistry to restore or correct every departure from the state of perfectness of that portion of our frame which lies within, or is immediately connected with, the oral cavity. On reviewing our history we might, on first impulse, be inclined to mark our progress by a comparison between a best specimen of an artificial denture of the Bone period, and that of one of the year 1882, and contrast the lack-lustre, ghostly expression of the former with the life-like appearance of our replica of nature. Or we might point to the many appliances for correcting irregularities, which, at first crude, became complex, and have now been reduced to the perfection of scientific simplicity. At the same time we might direct attention to the gradual evolution of the artificial velum, which so wonderfully restores the powers of articulation and deglutition; the application of plaster to impression taking; the introduction of plastic, yet quick and hard-setting compositions for the same purpose; the gradual perfection of adaptation which has been attained in the construction of the base plate, and which has enabled us to almost dispense with the irritating and cumbersome spiral springs; to the many nearly successful attempts which have been made in the direction of cast plates, and which, though not realising the dreams of their inventors, have always left behind them the marks of some good done, some step made in advance; and the same may be said in regard to the experiments made in the direction of combining porcelain gum with a light, enduring and easily moulded palatine base, and to the many applications in our laboratories of gas and steam.

If we were further to note in rapid detail the improvements in the manipulation of old materials, and specify the many new materials which have been introduced, and place alongside of these the ingenious machinery and contrivances, which, from time to time, have been devised to conserve the time and energy of the workman, and aid the dentist to more certain results, we might point to these with just pride as the most notable evidences of our progress, and feel inclined thereon to rest our claims. But a more thorough and leisurely searching inspection of the dental world will bring within our notice and convince us of the fact that the record of our progress does not end here, we have yet to acknowledge the accomplishment of a new order of education, the power of which has already been felt, and which, as time rolls on, will be accredited as the most prominent feature which has yet marked our progress, as well as the most potential factor in the future elevation and progression of the constructive section of our profession.

I allude to the compulsory scientific training of the dentist, by definite means, under well-defined directions, towards a definite end, and to the recognition by Parliament and the Medical Council that the dental surgeon is incompletely equipped, and, therefore, unfit for the pursuit of his profession, until he has had the advantage of a course of training in the principles and practice of mechanical dentistry.

And thus, I trust, has been settled for ever and a day the professional character of our handiwork. That it can never descend to the grade of mere mechanical labour, that it can never exist without the intervention between the patient and the bench-workman of the scientifically trained intellect, are propositions, which to the initiated and unprejudiced, are easy of comprehension. There have been and still are—though they are gradually hiding their diminishing heads—many men securing a livelihood by the practice of dentistry, who assert the contrary, and who seek to support their assertion by drawing an analogy between the work of the truss and surgical instrument-maker and the mechanical department of our own profession. But between the instrument-maker and the dentist, as we understand him and speak of him, there is no similarity. The instrument-maker's analogue is to be found in the work-room of the dental dépôt; and what a gulf there is between the points where the dépôt ends and the dentist's work begins!

The instrument-maker, day by day, manufactures a knife, a forceps or a truss, to a set pattern from which he may not depart. The dentist, day by day, CREATES a piece of mechanism, which, though subject in its construction to certain well-recognised mechanical principles, yet varies in its adaptation in every case as the innumerable and never recurring peculiarities of the individual present themselves for an exhibition of his skill, and this demands much more than mechanical capabilities.

Wisdom, born of experience, drove this fact home to the leaders of our profession, the best men of generations which have gone; and the best minds and best hands of the generation which is gradually passing away, rested not until they had obtained for us the means necessary for the proper learning of our art. These we have in the preliminary education in Natural Philosophy, in the course of instruction in Chemistry and in Metallurgy; in the three years' training in the work-room, and in the special course devoted to the Technology of dental mechanics and its prosthetic application. What effect this systematic and scientific training will yet exert upon the future of this special department is, of course, still a matter of conjecture, but when we look back and see the magnificent results obtained under an irresponsible and unsystematised method of instruction, we may well look forward with a secured hope to the grand possibilities which await us.

True it is that no education, no money, no circumstances can endow a man with capacity. As with the soil, so with the mind, and so with mechanical ability; you cannot make the original basis. Yet let its native properties be ever so poor, it is within your power to enrich and enlarge them. The timeous and systematic training of the mind in the principles, and an apportioned time systematically and assiduously spent in training the fingers to obey the trained mind, is bound to result in the production of a class of practitioners whose average work may equal, if not excel, the best productions of him who is possessed of special aptitude but who receives no fostering culture.

We have men in our midst who, though giants of to-day, may be excelled in stature by the men of to-morrow, and they of to-day are giving of their best that this may be so. We have materials at our command, which though good, bid fair to be superseded, and to this end we lend a hand. We have instruments and appliances at our side with which we are able to perform wonders, but which, when the rising generation has mastered the subtleties of electricity, will fade into insignificance.

With good men, good materials and good instruments we have attained a pitch of excellence in our work which though creditable, must not be accepted even as penultimate. There is still room for improvement in every section of our department, and we look to the young men to take advantage of their opportunities. We yet look and long for a material which may combine the strength and durability of gold, with the graceful lightness and compatibility of celluloid, and the colour, receptivity and lustre of porcelain. To seek for and obtain a combination of these qualities must be our future aim, and others which we desiderate will accompany or follow.

We must, however, in our pursuit of improvement avoid being deceived by the allurements of novelty, or enticed by the shadow of coming inventions, to leave the substance of present accomplishments. I trust that this section, the institution of which is a recognition of the fact that the capabilities of our professional handicraft are not yet exhausted, may continue to receive more and more attention at your hands, affording, as it does, the best arena in which individual thought may be concentrated, comparison instituted, and thereby latent conceptions be quickened, begetting as accomplished facts those perfections which robust and ingenious minds are striving for, and which, in the meantime, can only be looked upon as the Possibilities of Mechanical Dentistry.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Odonto-Chirurgical Society.

At the first meeting of the Session, which took place on the 9th ult., Dr. John Smith, President, in the chair, the paper of the evening was read by Mr. Thomas Gaddes, L.D.S., on "The Limitations of Dental Surgery."

The question "What is Dental Surgery?" was one to which every practitioner of that specialty ought to be able to give an answer, but as yet a complete definition had not been agreed upon, no one of those formulated having met with general approval. The question as to the limits of dental surgery was, therefore, a difficult one to deal with, but this was no justification for avoiding it. It had been said to be an ethical question, but this was an erroneous application of the term. His subject dealt with the relations of dentistry, as a subdivision of medicine, to other subdivisions of

that science ; whilst ethics dealt with matters of conduct, "the adjustment of acts to ends." The only connection between the two was that in order to be able to judge correctly the right and wrong of actions bearing upon dental surgery it was important to know, in the first place, exactly what dental surgery was.

In endeavouring to ascertain what are the quantities of the collateral branches of medicine that dental surgery includes, he would, at the outset, quote a most highly distinguished and esteemed member of the profession. In the last edition of Gant's Surgery, the special chapter on dental surgery is by Mr. Charles S. Tomes, F.R.S., who writes thus :—"There is a borderland between the provinces of the general and of the dental surgeon, with which, both for the welfare of the patient and the credit of the practitioner, it is important that each should be familiar The space devoted to dental surgery will, therefore, be most usefully devoted to this common ground." This includes dentigerous cysts, odontomes, abscess of antrum, diseases of the gums and alveolar processes, neuralgia, etc. The study, knowledge, and treatment of these diseases, which were here spoken of as being on the borderland of special practice, might also be regarded as supplying indications of the limits of dental surgery.

first The administration of anæsthetics was daily and very largely *and* undertaken by dentists. In the *Transactions of the Odontological Society of Great Britain*, Vol. XI., page 6, *et seq.*, there was recorded some experience of the personal administration of anæsthetics by Messrs. John Tomes, Barrett, Underwood, Woodhouse, Browne-Mason, Hunt, Dennant, Sewill, Walker and others, all men who are regarded as in the foremost rank of the profession as practitioners and teachers of dentistry. He believed it might be truthfully stated that a large majority of dental practitioners used such agents ; and so general had their employment of late years become, both in hospital and private practice, as a supply of a public demand, that the administration of anæsthetics was now regarded as embraced by dental surgery. The dental licensing bodies recognised this fact. At the examinations for the dental diploma of the Royal College of Surgeons of England, written questions upon the action of anæsthetics had been given on different occasions ; similar questions had also been given at the *viva voce* dental examinations of the several licensing corporations.

That the treatment of neuralgia, when associated with the fifth cranial nerve, was considered to fall within the limits of dental

surgery, there was very substantial evidence to show. Mr. Charles Tomes included neuralgia in the list of subjects with which he dealt in the dental section of Gant's Surgery, and in the textbooks on Dental Surgery, *e.g.*, in the works of Tomes, Salter and Coleman—chapters were devoted to the causes, pathology and treatment of neuralgia. Dental surgeons holding appointments at the general hospitals had, in many instances treated such cases. Mr. A. Coleman and Mr. F. Canton had, at the Dental Hospital of London, performed Gross' operation for the relief of neuralgia of the jaw, and Mr. Charles Tomes had resorted to nerve-stretching and nerve excision in severe and obstinate cases of dental neuralgia.

To pass on to the consideration of the difficult operations connected with the removal of impacted teeth and roots. Incising the gum and cutting away a portion of the alveolar process in order to dislodge an impacted or buried root was unquestionably a dental operation. The removal of portion of the ascending ramus of the lower jaw to facilitate the extraction of an impacted molar, as also the extraction of a diseased tooth through an external sinus, were operations that had on different occasions been resorted to and performed by dental surgeons. Such operations necessarily involved a relatively considerable amount of surgical interference and after-treatment.

The removal of fractured and necrosed spiculæ of bone, or the excision of very pronounced and painful septæ from the alveolar region of the jaws, and paring the bony alveolar margins, were recognised operations in dental surgery. Mr. Chas. Tomes writes: "Hypertrophy of gum and alveolar border may be removed by operation, the masses being pared away with a scalpel, or, if necessary, with bone forceps."

The treatment of chronic alveolar abscess is exceedingly common, and this, too, where there exists an external sinus, or even a fistulous communication with the cavity of the mouth. The treatment in some of these cases, occasionally including the conservation of the tooth, the disease of which was the prime cause of trouble, might extend over a period of many weeks or even months. This, of course embraced the use of such remedial agents as the case required. Mr. Thomas Arnold Rogers, in his presidential address before the Odontological Society, said: "These troublesome cases of suppuration having a dental origin . . . we used generally to relegate to the surgeon. But more properly they are dental cases."

The treatment of diseases of the antrum, where arising from the teeth, was ordinarily undertaken by the dental surgeon, and many cases, both in hospital and private practice, could be cited.

Cases of necrosis of portions of the alveolar processes of the jaws, whether arising from alveolar abscess or other causes, not infrequently came under the care of the dental surgeon. These diseases, generally of a chronic nature, usually required a somewhat long period of local and constitutional treatment, pending exfoliation and healing. And the removal of the sequestrum also required at times some little surgical dexterity. The text-books on dental surgery set forth these lines of treatment; and the literature of the specialty contained the records of many instances in which they had been adopted.

Tumours of the gum and periosteum of the alveolar process, having their cause unquestionably in, and associated with, the teeth, and in which there was no indication of malignancy, had been removed by dental surgeons. Mr. Coleman removed a tumour from the mouth at the Dental Hospital of London, and in connection with this case said, "He would offer some observations upon a few of the most common forms of tumour met with in the region of the mouth, which came under the care of the dental surgeon." Numerous other cases which have been treated under similar circumstances might also be mentioned. The several text-books on dental surgery not only described these growths, their nature and causes, but also entered into details regarding their treatment. Each of the several authors recorded cases of his own experience as a practitioner of dental surgery. Questions upon those growths were given by the dental section at nearly every examination for the dental diploma of the several licensing bodies.

The use of therapeutic agents both locally and internally would appear to be recognised as included in dental surgery by those whose recommendations and opinions were entitled to respect. Thus, in his lectures delivered before the College of Dentists in 1859, Dr. Richardson advocated the internal use of remedies for hæmorrhage after tooth extraction, neuralgia, &c. So did Messrs. Salter, Moon, Tomes, Coleman, Thos. A. Rogers and many other distinguished specialists. Yet there were some who held the opinion that the internal use of remedies was beyond the limits of dental surgery; and in the face of this difference of opinion it had been stated that there were "very few practitioners who were

in any way at a loss to recognise the well-known limits of their specialty."

Hitherto he had, for the most part, been dealing with the subject of the border-land, the debateable ground,—between general and special practice. The question of whether a person with or without this or that qualification should undertake those operations had not entered into the argument. He thought that question might justly be considered independently of the theme, What is dental surgery? If the answer to the question, Are those actions which are so performed and so written upon in the recognised literature of the day, within the limits of dental surgery? supported and upheld those who would thus raise the status of dental surgery, he would enquire, Is the education required for the L.D.S., sufficient to enable the licentiate in dental surgery to practise a branch of Medicine having such a scope? If it was not, then by all means let it be made equal to the requirements.

Directly bearing upon this question there was the opinion and resolution of the Council of the College of Surgeons of England, "That the Dental License should of itself be deemed a sufficient qualification to enable the holder to undertake the appointment of Lecturer on Dental Anatomy, Dental Physiology, or Dental Surgery, or of the post of surgeon to a special Dental Hospital, or the Dental Department of a recognised Hospital."

This resolution gave support to the conclusion that the work done in the dental departments of general hospitals, and also in special dental hospitals, was dental surgery, inasmuch as it might, in the opinion and with the sanction of the Council of the Royal College of Surgeons of England, be performed by the licentiate in dental surgery.

From a consideration of the opinions, actions, and writings of the most able teachers and leaders in the profession, he thought that the conclusion that must be arrived at was that dental surgery embraced the study and treatment of diseases of the teeth and of their contiguous structures—"contiguous structures," including neuralgia connected with the dental branches of the fifth nerve; impacted teeth; odontomes; dentigerous cysts; diseases of the gum and alveolar process, including simple tumours, chronic abscess, necrosis, and dental diseases of antrum; the use (local and constitutional) of such therapeutics agents as the treatment of those diseases requires, this implying the administration of anæsthetics.

Finally he would ask, did the science and art of dental surgery embrace so much, or less, of the collateral subdivisions of medicine which he had enumerated? The subject was an important one. He was quite aware that the precise limits of dentistry must, like those between medicine and surgery, be somewhat arbitrary; but now that the specialty was taking the position which had been accorded to it by the legislature, a position for which it had been struggling during the last quarter of a century, the question of the limits of dental surgery was never more pressing than at the present time.

A long and animated discussion followed in the course of which Mr. CROMBIE said he thought Mr. Gaddes had not paid sufficient attention in his paper to the consideration of the surgical status of the licentiate in dental surgery. A fully qualified surgeon practising dental surgery might of course perform any operation, and would be protected by his diploma against any contingency that might arise. Did the license in dental surgery afford equal protection to its holder? He thought it was a matter of great importance to determine this point before incurring any responsibility beyond that which ordinarily attached to a dentist.

Mr. WILSON thought that although in the present transitional state of the profession it might be difficult to lay down the exact limits of dental surgery, still after a time a tolerably well-marked boundary would show itself. One point of limitation they undoubtedly had in the fact that it was quite incompatible with his ordinary practice for a dental surgeon to take up cases the after treatment of which involved his visiting the patient; and this inability would not only tend to deter him from undertaking the treatment of doubtful cases, but would also compel him to call in a general surgeon in all cases when serious complications unexpectedly showed themselves.

Mr. FINLAYSON said he hoped the day would come when dental surgeons would be capable of operating on any case that might occur in their practice, but he was of opinion that, during the present generation of dentists, for obvious reasons which need not be further referred to, only purely dental operations should be performed by ^{20 or 25} the dentists, and that operations of the major and more serious sort, such as were referred to in Mr. Gaddes' paper, ^{some} should be relegated to the surgeon proper. The use of constitutional remedies, such as the prescribing of an alterative, or any other simple matter of that sort, was he thought not only allowable

but absolutely called for when needed. The dental surgeon of the future would occupy a much higher position as regards medical and surgical knowledge, and would also be a man of greater culture than the average dental surgeon of the present day ; then[?] would be the time to agitate this question.

Mr. G. W. WATSON agreed for the most part with what Mr. Gaddes had said in his paper with regard to the scope of dental surgery ; he thought it quite within the province of the dental surgeon to undertake operations for the treatment of dentigerous cysts, odontomes, and affections of the antrum consequent on the presence of diseased teeth. But in the case of tumours he thought it would be well for dental surgeons to confine themselves to the simple non-malignant varieties, and more particularly to those having a dental origin.

Mr. BIGGS thought that dental surgeons ought to be *able* to perform all operations connected with the oral cavity, whether they actually undertook such cases or not ; and that the ability of the operator should be the only limit to the operations of the dental surgeon in his proper capacity.

Dr. WILLIAMSON said that the extreme view of what a dentist should be qualified to perform was that put forward by Professor Garretson, of Philadelphia, who thought that every dentist should be an "oral" surgeon and should undertake the performance of all operations, however formidable, on the tongue, lips, upper and lower jaws, &c. Now, such an extension did not seem to be justifiable, as the ordinary dental routine was incompatible with the performance of operations which might place life in jeopardy, and which would necessitate a constant out-door attendance for their after treatment, so that such cases were necessarily much better left in the hands of the general surgeon, who also, from his ordinary experience, would be much better qualified to cope with such emergencies as might arise. As a whole, then, it was evident that the limitations of dental surgery were not so much the limitations of anatomy as they were those suggested by expediency and common sense.

The PRESIDENT said the enquiry of the evening resolved itself into the endeavour to obtain a correct and specific definition of the meaning and extent of what was termed "Dental Surgery," and of the kind and range of practice to which the diploma of the dental licentiate was supposed to entitle its possessor. He thought that no actual line of demarcation could possibly be laid down.

The practitioner's own discretion—first in the knowledge of his own ability of what he ought to do, and what he could conscientiously undertake, and secondly the bearing in mind what a jury might think of his having done so, would always be the principal guiding circumstances to be considered. There was no doubt that a limit had been intended to be exercised in the case of the dental licentiate's sphere of practice. That limit might be, and doubtless was, vague enough. There was a borderland on which he might encroach; but, in doing so, he incurred a responsibility. There was a boundary to his field of practice somewhere; but that somewhere he had been left to find out for himself, and accept the result. The whole responsibility, in fact, had been thrown upon his own judgment in the matter. It was in this respect that the dental ~~surgeon's~~ ^{licentiate's} qualification differed from that of the surgeon-accoucheur, the surgeon-oculist, the surgeon-aurist, or the surgeon-specialist of other kinds, properly so called. These last were fully qualified practitioners, with their special acquirements and experience superadded to this. Such specialists ranked not with but above the ordinary practitioner, and deservedly so. They had superadded to his studies and examinations, and degrees, the labours, the knowledge, and experience required to master some special subject, and it might so happen that some day the dental surgeon would, like them, be the surgeon, who had added to his general qualification a clear and luminous and comprehensive knowledge of and ability to treat his own specialty, and would take the same high position as the practitioner who devoted himself to diseases of the brain, the heart, the lungs, eyes, ears, kidneys, and other special departments of medicine. But until that time came, it would not do for the licentiate in dental surgery to undertake, *ab initio*, cases unconnected with the teeth; and unless, for example, a tumour of the jaw, even though connected with the teeth, appeared to be of such a nature as to afford a prospect of cure by some strictly dental operation, it was difficult to say whether a mere dental licentiate would be justified in undertaking its treatment. Such cases, as had been already said, generally required the surgeon to visit the patient, and not the patient to visit the surgeon; and where a number of patients and a number of visits of the kind fell to the surgeon-dentist, it was more than could be expected that his dental practice, properly so called, would not suffer by it; and it was more than likely that full justice could be done neither to the cases falling under his care as a dentist pure and simple, or as a special

surgeon. It might be predicted, however, that these difficulties would yet be met, and the problem solved, possibly by a still further specialisation of dentistry—the dental surgeon becoming less of the dental mechanic, and the mechanic less of the surgeon, and both assuming a higher status and greater perfection in their respective departments. The question, Dr. Smith remarked, was a large one; and the whole profession he considered indebted to Mr. Gaddes for bringing it forward this evening as he had done.

Mr. GADDES, in reply, said he was glad the subject of his paper had been received so favourably by the meeting, and especially did he appreciate the remarks of their distinguished president. The objections that had been made to a dental surgeon ordinarily performing such operations as those he had mentioned, might be resolved into a question of convenience. If it were not convenient for the dentist to visit his patients, or to receive several visits, he need not undertake work that involved such treatment. He would impress this fact upon the Society, viz., that in his paper he had not made any definite statement of his own as to the limits of dental surgery; but he thought that, having instanced examples of what had been done under the pale of dental surgery, the conclusion to be drawn was inevitable.

Some interesting cases and specimens having been brought before the Society by Messrs. Wilson, Biggs and Watson, the President stated that at the next meeting (December 14th), a paper would be read by Mr. Wilson, on "The Classification of the Teeth in the Mammalia," and adjourned the meeting.

Odontological Society of Great Britain.

THE ordinary monthly meeting of this Society was held at 40, Leicester Square, on Monday the 4th inst., Mr. S. Lee Rymer, President, in the chair.

Mr. BRUNTON, of Leeds, described a method of vulcanizing rubber, which he had followed for three years past. Instead of investing the case in plaster of Paris, he placed it in a tin box and covered it with dry powdered steatite, or French chalk; no flask was required. Of course the packing of the rubber must be done before the case was put into the box or flask. Any vulcanizer might be used, but Mr. Brunton preferred Dr. Campbell's "new mode" apparatus to any other which he had tried. He was in

the habit of coating the surface of the model, where the rubber would be in contact with it, with liquid silic ; this gave the model a hard, smooth surface, and left a smooth surface also on the palatal side of the case, which required little or no finishing. The lingual and labial surfaces of the case he covered with tinfoil, which kept it in form and prevented the steatite from sticking to the rubber. After numerous experiments he found that heating for three hours at 60lbs pressure gave the best results. He claimed as the advantages of this process greater toughness, density, and hardness in the cases, no porosity, no raised bites, and less risk in the process of vulcanizing.

Mr. WALTER COFFIN said that the process which had just been described was that ordinarily used in the manufacture of all small rubber articles which were not vulcanized in metallic moulds ; such articles were simply packed in layers in a box with steatite and subjected to dry heat. It was the opinion of manufacturers that contact with moist plaster or steam injured the texture of their goods.

Mr. GEORGE WILLIAM PARKINSON read notes of a very interesting case of suppuration in the antrum of nine years' standing, which had come under the care of his uncle, Mr. George Parkinson, of Bath. After prolonged treatment, extraction of roots, &c., a buried fragment of tooth was discovered, and this having been removed with some difficulty the patient made a rapid and complete recovery.

Mr. REDMAN brought under the notice of the Society a preparation called Eugenol, derived from oil of cloves, which was possessed of anodyne properties and was especially useful for obtunding the pain of sensitive dentine ; a little of the liquid should be applied from time to time to the surface of the dentine as it was being excavated.

Mr. COLEMAN mentioned the case of a little girl, aged only four and-a-half years, then under his care, who was actually cutting the permanent central incisors of the lower jaw.

The PRESIDENT then called upon Mr. Oakley Coles to open the adjourned discussion on Dr. Carpenter's paper read at the last meeting of the Society.

Mr. OAKLEY COLES said there were many points in the paper which would serve as bases for discussion, but as the time at their disposal that evening was limited, and there were, no doubt, many other members wishing to join in the debate, he would only refer briefly to three of these.

In the first place Dr. Carpenter had stated that necrosed teeth were very liable to decay. He (Mr. Coles) thought that the experience of the profession was that a necrosed tooth was not more liable to decay than other teeth, so long as it was retained in its natural position, though if removed from its socket and placed in a denture it was liable to decay. Then Dr. Carpenter had stated, as a fact, that the children of gouty parents were very liable to dental caries. He (Mr. Coles) thought that the experience of the dental profession was, that those who were the subject of inherited gout had large strong teeth, which were but little liable to be attacked by caries, but which were liable to be cast off by recession of the gum or as the result of chronic congestion of the alveolo-dental membrane.

Dr. Carpenter's reference to the effects of rheumatism on the teeth was not very clearly expressed, but he (Mr. Coles) took it to mean that Dr. Carpenter had not been able to observe any direct connection between rheumatism and caries. But the experience of the dental profession certainly was that acute rheumatism had a very definite, and often a most disastrous, effect on the teeth, for it was liable to be followed by the worst form of caries—that known as "soft caries."

He thought that Dr. Carpenter's statement that the teeth were secretory organs was scarcely tenable. The phosphates were necessary for the nutrition of the teeth, and could scarcely therefore be considered as waste products. Mr. Coles also pointed out some inaccuracies in Dr. Carpenter's description of the Kostruma people, and criticised his reference to the subject of eternal punishment, which was, he considered, a matter altogether beyond the subject of the paper.

Mr. WOODHOUSE mentioned the case of a young gentleman, now about nineteen years of age, who had perfect teeth, but whose father and mother both had bad teeth. The former especially was one of a large family, all the members of which had bad teeth, and was, besides, himself of a very delicate constitution. Mr. Woodhouse attributed the improvement in the son's teeth to the fact that his mother attended most carefully to dietetic hygiene, eating whole meal bread, &c., and that the boy was brought up in the same way, getting brown bread, porridge, &c., and no meat for some years. He thought it was a good example of what might be done, by careful management, to overcome a special hereditary predisposition.

Mr. HENRY SEWILL thought that although the object of Dr. Carpenter's paper was a good one there was certainly much in it that was open to criticism. It seemed to be implied in the paper that the causes of dental caries were doubtful or unknown, but as a matter of fact there was no mystery about them. There could be no doubt that caries was wholly due to the action of external agents; that it did not depend on any constitutional state acting through the medium of the circulation, but was entirely due to the state of the mouth. The predisposing causes were structural defects in the teeth, and overcrowding, due to imperfect development of the jaw. There was no doubt that hereditary syphilis did cause defective teeth, and that some defects might be due to the administration of mercury during childhood. But he could not agree with Dr. Carpenter in considering gout a cause of caries; he was strongly of opinion that it had no predisposing influence whatever. The *exciting* cause of caries was the action on the teeth of the acid products of decomposition formed in the mouth, which permeated the porous enamel and acted on the dentine. The investigations of Messrs. Underwood and Milles had shown also that the progress of the disease was assisted by the proliferation of micro-organisms in the canals of the dentine, these organisms having themselves the power of producing an acid secretion. Altogether the etiology and pathology of dental caries were now sufficiently well known, and there was no longer anything mysterious about them.

The discussion was continued by Mr. REDMAN, who suggested that Dr. Carpenter had omitted to mention one predisposing cause of caries, viz., the use of carefully cooked and soft food, it being a well-known physiological fact that any organ which was not fully used would deteriorate; and by Mr. HENRY, who asked whether it really was an established fact that dental caries had become more widely prevalent. No doubt it came under observation more, but might not this be due to the fact that more attention was now paid to the preservation of the teeth?

Mr. COLEMAN and Dr. WALKER both gave it as their opinion that the increased prevalence of caries was an undoubted fact. The latter dissented from Dr. Carpenter's statement that gout predisposed to caries. He thought that improper food in infancy was one common cause of defective teeth, and agreed with Mr. Redman that their comparative disuse in mastication was another cause.

Mr. HUTCHINSON also thought that the artificial life led by mothers, and the injudicious feeding of infants, were two chief causes of the prevalence of bad teeth. With regard to the supposed effects of syphilis on the teeth, he asked Dr. Carpenter whether he did not consider that this might be, at least in part, due to the mercury given for the purpose of counteracting other manifestations of the disease.

Dr. CARPENTER then replied at some length, reasserting the truth of his statements, particularly with regard to gout, which he said were founded on personal observations made during forty years experience of medical practice. As regards rheumatism he admitted that it had a decided influence on the teeth, but thought that this part of the subject required further and more careful observation. Mercury was certainly not the cause of notched teeth, since he knew three families in which the children had typical syphilitic teeth, but had taken no mercury. He quite agreed that the improper feeding of children was a very common cause of bad teeth, and thanked Mr. Woodhouse for his very apposite example of what might be done by making practical use of scientific truth.

The PRESIDENT then called upon Mr. CHARTERS WHITE to read his paper on "The Salivary Glands of Insects," of which the following is a very brief epitome:—The salivary glands of the insecta might be divided into three groups. First, the tubular, which might be again subdivided into the long and convoluted tubes of the Flies and Lepidoptera, the branching tubes having blind extremities, seen in *Blaps Mortisaga* (Churchyard Beetle), and the tubes surrounded at intervals by whorls of coecal bags, as seen in *Cicada*. The second group had the racemose form of gland, as seen in the common Cockroach; and the third might be called the cystic, consisting of mere globular distensions of a secreting tube, as in *Pulex irritans* and *Cimex*. The majority of insects had only one pair of salivary glands, opening on the floor of the mouth, but some had two and even three pairs, as met with in *Nepa cinerea* (the Water Scorpion). In the higher animals no provision was made for storing saliva; it ran away as fast as it was secreted, and was swallowed. But in the Cockroach, sacs were attached to the glands, in which the secretion could be retained until required to facilitate mastication and digestion. In herbivorous insects the salivary glands were largely developed, whilst in the carnivorous they were comparatively insignificant.

Mr. White then went on to describe more fully an example of each class, taking the common Blowfly as an example of the first, the Cockroach of the second, and the common Flea of the third. The descriptions were rendered clear by diagrams, and by drawings and photographs of some beautifully prepared microscopic specimens; these latter being also placed ready for inspection, were examined with much interest at the close of the meeting.

At the conclusion of the paper the PRESIDENT remarked that it was a most interesting communication, but one which they were scarcely competent to discuss, even if there had been time, and having thanked the contributors of the evening on behalf of the Society, he adjourned the meeting.

Society of Licentiates in Dental Surgery of Glasgow.

THE annual meeting of this Society was held at Anderson's College on the 15th ult., Mr. J. R. Brownlie, President, in the chair. From the report, which was read by the Secretary, it appeared that the Society now numbered twenty-seven members, nine having joined during the year; the meetings had been well attended and a larger number of papers read than during either of the two preceding years. The Treasurer's report was equally satisfactory.

Amongst the cases of interest shown at the meeting were two plates of tartar, which had been found adhering to the buccal surface of the second upper molar on each side of the mouth. They were exceedingly hard, somewhat circular in form, and measured about $1\frac{1}{2}$ inch in their greatest diameter by $\frac{3}{8}$ inch in thickness. Their removal had the effect of altering considerably the contour of the patient's face.

The following is the list of office-bearers elected for the coming year:—

President: Mr. J. S. Woodburn.

Vice-President: Mr. James Cummings, senior.

Hon. Secretary: Mr. Donald Cameron; *Treasurer*: Mr. John Melville; *Curator and Librarian*: Mr. A. B. Young; *Editor of Transactions*: Mr. J. R. Brownlie; *Council*: Messrs. John Foulds, William Grey, William Lang, and Benjamin Sutherland.

Dental Hospital of London.

THE annual dinner of the Past and Present Students of this Institution took place at the Freemason's Tavern on Saturday the

2nd inst. Mr. Jas. Parkinson occupied the chair, and was supported by Messrs. E. Saunders, R. Hepburn, T. A. Rogers, S. Cartwright, Thomas Underwood, Gregson, Coleman, Walker, Dennant, &c., about 120 in all.

The CHAIRMAN, in proposing the health of the Past and Present Students, said it gave him great pleasure to meet so many old friends and associates, representing the work of the hospital for the past five-and-twenty years, and to see men around him whom he had known as students, but who were now themselves teachers and lecturers. Present students should appreciate highly the advantages now at their command, as compared with the state of things which existed in his own student days; but at the same time the requirements were higher, and no doubt it required some amount of industry and perseverance to get through all that had to be done.

Mr. STEWART HEPBURN having responded for the Past Students and Mr. BUCKLAND for the Present, Mr. OAKLEY COLES proposed the toast of "The Dental Hospital and Staff," in a speech which was received with much laughter and applause, concluding by saying that the Dental Hospital of London had outgrown its premises in Soho Square, and it bade fair before very long to outgrow also its limits in Leicester Square. He would not venture to say what it would do then, but he had no doubt its resources would be equal to the emergency, and that it would grow to greater eminence and greater usefulness.

Mr. MOON, in replying, alluded to the great loss the hospital and the profession at large had sustained by the death of Mr. Clover.

Mr. CARTWRIGHT, in proposing "The London School of Dental Surgery and its Lecturers," said that having himself been one of those who instructed pupils in old times, he could sympathize with those who now undertook that duty, and could, at the same time assure the pupils of the great advantages they now enjoyed.

Mr. CHAS. TOMES, in responding for the Lecturers, complained that it was difficult to assume a proper tone of modesty, and yet to admit on behalf of his colleagues, if not of himself, that the compliments which had been paid them were really deserved.

Mr. SAUNDERS proposed the health of the Chairman who was, he said, intimately connected with all the chief institutions of the profession and a consistent supporter of them all. He was one of those who were largely endowed with that form of practical wisdom called common sense, and in any position of doubt one

could seldom do better than follow his lead. Long might he continue to direct and advise.

But the great event of the evening was the presentation of a testimonial—a handsome ormolu carriage clock in case, subscribed for by the students of the hospital—to Mr. Claude Rogers, on the occasion of his resigning the post of Demonstrator of Gold Filling, which he had held for nearly five years. The presentation was made on behalf of the students by Mr. R. H. Woodhouse, who remarked that Mr. Rogers had not only been one who taught well, as a master of his art, but one who taught so kindly and patiently as to win the esteem of all. It might be taken as a proof of his skill in teaching that a gentleman had been selected as his successor, who owed all he knew to Mr. Rogers; concluding by saying, "In the name of your late pupils I present you with this clock, as a token of the high esteem in which you are held by them, and of their appreciation of your skill as an operator."

Mr. ROGERS, in reply, thanked the donors for the way in which they had shown their appreciation of his services. He had tried to assist them to the best of his ability, and they, on their part, by the steady way in which they had received his instructions had made his work a pleasure.

Mr. David Hepburn provided a programme of vocal music with his usual success, a very amusing selection from Sullivan's "Trial by Jury," being especially well received.

National Dental Hospital.

ANNUAL DINNER OF PAST AND PRESENT STUDENTS.

This gathering took place at the Guildhall Tavern, on the 23rd ult., Dr. W. H. Broadbent in the chair; about sixty gentlemen connected with the hospital and school were present.

After the usual loyal toasts, Dr. STRONG, an old student of the hospital, proposed the health of the "Consulting Surgical and Medical Staff," remarking that he well remembered the sayings which had fallen from the lips of the teachers of his day, and he had no doubt the lessons impressed by the present staff would be at least as much valued by his successors.

Mr. HARRY ROSE having replied on behalf of the Staff, the CHAIRMAN proposed the toast of the evening, "The Prosperity of the National Dental Hospital and College," remarking upon the strong *esprit de corps* which existed among those who were, or had

been, connected with the Institution as one of the strongest signs of vitality in the present, and best guarantees of increased prosperity in the future.

The DEAN, MR. GADDES, in acknowledging the toast, said that being himself one of the teachers it would not do for him to say much about either their virtues or their shortcomings, but he might mention, as tending to show the nature of the teaching imparted at the hospital, that all the students they had sent up during the year to the Royal College of Surgeons of England had been successful in passing their examinations. He also remarked upon the value of such meetings as their present one, at which teachers, workers and fellow-students came together year after year, in keeping up old friendships and maintaining that *esprit de corps* by which, as the Chairman had said, the prosperity of their school so greatly benefited.

Mr. RYMER, in proposing "Past and Present Students" spoke of the honour to which many of their old students had attained, and highly complimented the present students on their good conduct and attention to their work.

Mr. OAKLEY COLES then proposed "Other Dental Schools" and the "Visitors," remarking upon the way in which the former had multiplied during the last few years until we could now boast of a very fair array of dental institutions.

Mr. SMITH TURNER responded for the visitors with a characteristic speech, and other toasts followed, amongst them, of course, the health of the Chairman, which was proposed by Mr. WEISS.

Some excellent music and recitations added greatly to the enjoyment of the evening.

NEW INVENTIONS.

Fletcher's New Ladle Furnace.

MR. THOMAS FLETCHER, of Warrington, sends us a new pattern of gas ladle furnace, distinguished by the ingenuity and efficiency characteristic of the laboratory appliances devised by him. It is adapted for use with any "boiling" burner of the ordinary pattern, which it shields from injury by molten metal accidentally spilled, and consists of three independent simple castings; a flat annular trough for the protection of the bench; a hemispherical body surmounting the burner, on three feet, cleverly arranged to support,

centrally and firmly, ladles almost of any size or shape, at the *proper height above the flame*, and to conduct any spilled metal from the bench or burner into the base plate; and a dome-shaped cover, shown in our cut as lifted off, and hung at the side upon a lug on the rim of the body casting. We found that with London gas at half-an-inch pressure, *starting all cold*, three-and-a-half pounds



of zinc were melted in nineteen minutes, succeeding melts, *all hot*, taking only half the time, and that a corresponding amount of lead, about four-and-a-half pounds, all hot, melted in six minutes. We understand it is made in two sizes, for ladles up to seven and eight-and-a-quarter inches wide respectively. The whole arrangement is simple, handy and strong, remarkably cheap, and should be very effective.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Neurectomy of Inferior Dental.

DR. SONNENBERG, of Berlin, has instituted a new operation for the excision of a portion of the inferior dental nerve, which he describes in the *Berliner Klinische Wochenschrift* for October 16th. It will be remembered that the nerve in question enters its bony canal on the inner surface of the ramus of the lower jaw, under cover of the internal lateral ligament. Dr. Sonnenberg found in the dead subject that, having the head held strongly

backwards, it was possible to reach the inferior dental nerve by a neat incision, which was begun one centimetre and-a-half in front of the angle of the jaw, and continued along the (in this position) ascending border of the body of the lower jaw for three to four centimetres, as far as the facial artery—an incision which corresponds roughly to the insertion of the masseter muscle. We may say that two centimetres and-a-half is an inch, as nearly as may be. This being done, the inner surface of the lower jaw-bone must next be cleaned up to the internal lateral ligament, which usually lies about two centimetres and-a-half from the angle of the jaw; the insertion of the internal pterygoideus must be separated from the bone; the ligament and nerve may now be felt, and with good light the latter can be seen in the bottom of the crateriform wound. Next a strong blunt-pointed hook must be conducted by the finger up to the ligament, and then somewhat upwards along the ascending ramus of the jaw, and at the same time inwards in the direction of the buccal mucous membrane. In this fashion the nerve is hooked up without touching the neighbouring artery, which lies very close to the bone. The lingual nerve is quite to the inner side and is not meddled with. The inferior dental so secured is very extensible, and can be drawn down towards the angle of the jaw, and a portion easily cut therefrom. The other methods (done either from the mouth, or by trepanning the lower jaw from the outside) are nothing like so good as this new operation, according to the author. The advantages are enumerated:—(1) The wound is the smallest possible; (2) the operation is done comfortably, provided the formal retraction of the head is thoroughly observed; (3) the bleeding is insignificant; (4) the capsule of the submaxillary gland is left intact, and so no burrowing of pus can take place there; (5) the nerve is easily found and brought forward alone; (6) a good piece can be excised, because the nerve can be drawn out so easily; (7) the wound is favourably situated for healing; (8) the scar is small, and is in an unobjectionable place. Dr. Sonnenberg has operated on the living subject three times for neuralgia, with eminent success both as regards operation and relief from pain. Von Langenbeck has used this method of operating once, but the nerve was only strongly stretched, not excised. The relief from neuralgia seems to have been equally great.—*Medical Times and Gazette.*

ANNOTATIONS.

WE have to call attention to the fact that in future both the Publishing and Advertisement departments of this Journal will be under the management of Messrs. J. & A. Churchill, of New Burlington Street, W. We need hardly say that this change has not been brought about by any feeling of dissatisfaction with Messrs. Smith, Elder & Co., from whom we have always received the greatest attention and courtesy, but partly on account of the convenience of having these two department under one head, and also because it is thought that the distribution of the Journal may be more conveniently superintended by a house having a large connection amongst the medical and dental professions than by a general publishing firm, however eminent.

It will also be seen by reference to our report of the late meeting of the Representative Board, that Dr. Walker finds that the demands of his practice and the pressure of other business will no longer permit him to hold the post of Editor, and that his resignation was accepted by the Board with a hearty vote of thanks for the time and trouble which he had expended on the conduct of the Journal during a very critical period of its existence.

IN connection with these changes we feel bound to make an urgent appeal to our readers and correspondents. In spite of the fact that since January last a notice has appeared at the end of every number of the Journal requesting that all communications for the Editor should be addressed to 40, Leicester Square, and that for the last four months a similar request has appeared also on the first page of each number, a great many letters, &c., are still sent to Grosvenor Street, to Waterloo Place, and, indeed, anywhere but to the proper place. We once more ask our correspondents kindly to pay some little attention to the notices printed at the end of each number. Cheques for subscriptions to the Association should *not* be addressed to the Editor, nor contributions for the Journal to the Hon. Secretary. Attention to these points would save the officers of the Association a good deal of unnecessary trouble.

It will be seen from our report of the proceedings at the late

meeting of the Representative Board that it is in contemplation to republish the report of the proceedings at the Liverpool Meeting early next year in a separate form as a volume of "Transactions." The American Dental Associations have long adopted this course, and there is certainly much to be said in its favour.

A DEPUTATION composed of influential members of the British Medical Association, introduced by the Duke of Westminster, had an interview on the 9th ultimo, with Lord Carlingford, the President, and Mr. Mundella, the Vice-President of the Privy Council, at their office at Whitehall, to urge upon Government the immediate necessity of legislation with reference to the reform of the law as to medical education and the granting of diplomas, and especially to beg that, at the earliest possible date, a Bill might be brought forward in Parliament, based upon the report of the Royal Commission on Medical Acts. Lord Carlingford replied that Mr. Mundella and himself thoroughly agreed with the deputation in thinking that legislation upon the subject ought to take place as soon as possible, and they should be very much disappointed if it did not take place during the ensuing session of Parliament. At the same time the present backward state of public business made it impossible for them to commit themselves to a promise. Mr. Mundella suggested that there might be a better prospect of success if the Bill was first introduced into the House of Lords and promised to do his best to promote the wishes of the deputation. The interest of this subject for us lies in the fact that, as we recently pointed out, should a conjoint Board be appointed to examine candidates for medical qualifications,—and this is one of the recommendations of the Royal Commission,—the same arrangement would, according to section 28 of the Dentists Act, also come into force with regard to the examination for the Dental License.

APPOINTMENTS.

MR. JOSEPH MILLS, M.R.C.S.Eng., has been appointed Administrator of Anæsthetics at the Dental Hospital of London in the place of the late Mr. Clover.

MR. W. G. DAISH, L.D.S.Eng., has been appointed Hon. Dental Surgeon to the Royal Isle of Wight Infirmary.

Mr. W. F. CORNELIUS, L.D.S.Eng., has been appointed Dental House Surgeon, and Mr. J. O. BUTCHER Assistant House Surgeon, to the Dental Hospital of London.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

On the Use and Abuse of Arsenic.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—A great deal has been said and written on this subject, yet the widest difference of opinion seems still to prevail as to whether a pulp should be saved by capping or devitalized by arsenic.

I have heard gentlemen say they never use arsenic. How then, I should like to ask them, would they treat a pulp in which spicula of bone, or what I have heard called "pulp stones" have formed? I have known several cases of capping which have failed from this cause. I think pulps should be saved whenever possible, but I find I cannot do without arsenic in some cases.

As to the best way to apply it. After adjusting the rubber dam to as many teeth as will allow free access to the tooth to be treated, the cavity should be dried, and as much of the decay removed as possible without pain to the patient; the cavity should then be wiped out with carbolic acid, and the arsenic applied exactly on the pulp. Then cut out a piece of cardboard and lay it over the pulp, so as to protect it entirely from any pressure, fill over with plaster of Paris, smooth off flush and varnish. A pulp thus treated, in my experience, never gives pain; it is pressure that causes pain after the application of arsenic.

Then as to capping. Mr. Fred. Rose, writing in the *Dental Record* on this subject, advises the use of thin cork. He states that the principal cause of failure is from serum and gases forming under the stopping, and he suggests two ingenious methods for giving vent to these products. Whilst Mr. Cunningham, at a clinic at the Liverpool Dental Hospital, used oxide of zinc mixed with carbolyzed resin laid directly on the pulp, and filled over this with oxychloride of zinc. This seems an excellent method. The easiest way to put the oxide of zinc and resin in its place over the pulp is to press it in with a piece of cotton wool on the end of a plugger, as it sticks to an instrument, but the wool can be withdrawn without removing the paste. Hoping that these remarks may draw out other opinions on this important subject.

I am, Sir, yours &c.,

GEO. BEAVIS, L.D.S.I.

Newport, Monmouth.

Detachable Springs.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Having read accounts of the detachable springs invented by Mr. Hempel, I was lately tempted to try them for an old gentleman who travels about, and who had got into trouble abroad with the old fashioned, but well-tried springs.

The case was a vulcanite upper and vulcanite and gold lower. The new springs were inserted, and within a week the patient returned twice; the small screw, which supplies the place of the usual bolt, had come out and was lost, and the others were working out. My opinion is that the play of the swivel on the screw naturally tends to loosen it, and I must say I think my patient was correct when he said, "I should not like to travel about with this new arrangement."

There was nothing for it but to put in plain bolts, and do away with the small detached screws altogether. The springs are still detachable, by reason of the split bolt, like the one so commonly used in fastening watch guards, or the snap clasp. Even here I should like to give a decided opinion that they are far too stiff to remove to be of real value to a patient going to India, or elsewhere out of the way of a dentist, and who desires to be enabled to replace a broken spring with facility.

I still think that they are so near "a good thing" that the ingenious inventor is quite capable of improving them, in which endeavour I honestly wish him success. Meanwhile, I for one will hesitate to purchase springs which are somewhat costly, and which appear to me still to require perfecting. Has any other reader found the imperfections I speak of, and if so will he kindly say as much in your next issue.

I am, &c.

E. M. TOD.

ERRATA ET CORRIGENDA: We are requested by Mr. Claude Rogers to state that the gold used by him at his demonstration at the Liverpool Dental Hospital, noticed at page 566 of our last issue, was not "Kearsing's," but Messrs. Ash's new Cohesive Gold, which he considers at least as good as any at present in the market.

In the list of successful candidates for the L.D.S.Eng. which appeared in our last number, the name of Mr. A. H. Tester was, by mistake, printed Jester.

TO CORRESPONDENTS.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 40, Leicester Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

Advertisements to Messrs. J. & A. CHURCHILL, New Burlington Street, W.







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